



TETRA TECH



Project Manual
State of Montana – Department of Justice
Natural Resource Damage Program

Racetrack Pond Fishing Access Site and Habitat Improvement Project

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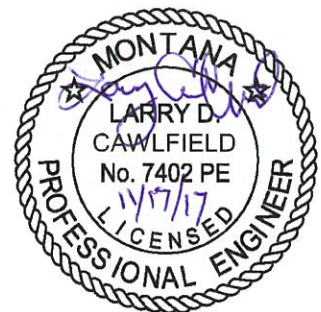
Bid Bond

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Bid Sheets and Signature Page

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Acknowledgement of Addenda



November 2017

PROJECT MANUAL

Racetrack Pond Fishing Access Site and Habitat Improvement Project

Prepared for:

State of Montana – Department Of Justice
Natural Resource Damage Program
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Helena, Montana 59620-1425

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Tetra Tech
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November 2017

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MONTANA NATURAL RESOURCE DAMAGE PROGRAM

Racetrack Pond Fishing Access Site and Habitat Improvement Project No. 700103

INVITATION TO BID

Sealed bids for the **Racetrack Pond Fishing Access Site and Habitat Improvement Project - Contract Number 700103** will be received by the Montana Department of Justice, Natural Resource Damage Program (NRDP) at 1720 9th Avenue, Helena, Montana 59620-1425 **until 3:00 P.M.** local time on **December 15, 2017**. Said bids will be publicly opened and read aloud.

Racetrack Pond is located adjacent to the Clark Fork River off Interstate 90 at exit 195 along West River Road near Racetrack, Powell County, Montana, Section 16, Township 06 North, Range 9 West, as shown on the Drawings and described in the Technical Specifications. The Montana Natural Resource Damage Program (NRDP) in cooperation with the Montana Department of Fish, Wildlife and Parks (FWP) proposes to improve the Racetrack Pond Area near Racetrack, Montana, for the purpose of developing the area into a fishing access site (FAS). The FAS developments include access roads, walking trails, boat launch, parking area including U.S. Americans with Disabilities Act (ADA) accessible parking, and an ADA fishing access platform. Habitat improvements include regrading of the pond area for the purpose of increasing the quality of shoreline vegetation, wetlands, waterfowl habitat, and aquatic habitat.

The Work will consist of, but is not necessarily limited to, providing all labor, materials, earthwork, and incidentals necessary to complete the Work as shown on the Drawings and described in the Technical Specifications. The Work consists but is not limited to dewatering Racetrack Pond, regrading of the pond area, mixing owner-provided compost with onsite vegetated backfill, loading and hauling of Beck Borrow vegetative backfill, mixing of owner provided compost with Beck Borrow vegetative backfill, placement of compost-amended vegetated backfill (both onsite and Beck Borrow), construction and installation of a pond outlet structure, construction of an outlet channel and construction and installation of Fishing Access Site Amenities (FAS), including access roads, walking trails, boat launch, parking area, fishing access platform and pit latrine (precast pit latrine to be supplied by others, but installation of the pit latrine is included in the Work).

Digital copies of the bidding documents are available at the NRDP website <https://dojmt.gov/lands/invitations-for-bids/>. Bid document hard copies will be available at the pre-bid conference for a fee of \$30 per set (cash only). To obtain a bid document hard copy at the pre-bid conference, contractors are required to place orders no later than 3-days prior to the pre-bid conference by calling 406-444-0205.

The contract documents, consisting of half-size drawing and Project Manual, may be examined or obtained at the office of Tetra Tech, located at 825 West Custer, Helena, MT 59602, phone (406) 443-5210 in accordance with Article 2.1 of Instruction to Bidders. Required deposit is \$30 per set, which is not refundable.

In addition, the Drawing and Project Manual may also be examined at the following locations:

Billings Builder's Exchange
Great Falls Builder's Exchange
Missoula Plans Exchange
Bozeman Plan Room

Helena Copy Center
NW Montana Plans Exchange
Butte Builders Exchange

A **mandatory** pre-bid conference will be held at the Project site at **10:00 am, December 5, 2017**. Interested Contractors are required to attend.

Contractor and any of the Contractor's Subcontractors bidding or doing work on this project are required to be registered with the Montana Department of Labor and Industry (DLI). Forms for registration are available from DLI, P.O. Box 8011, Helena MT 59604-8011 or in person at 1805 Prospect Avenue, Helena, MT. Registration information is available at (406) 444-0563 or at <http://erd.dli.mt.gov/work-comp-regulations/montana-contractor/construction-contractor-registration>. All laborers and mechanics employed by Contractor or Subcontractors in performance of the construction work shall be paid wages at rates as required by the Montana Prevailing Wage Rates.

The Contractor and Subcontractors must fully comply with all applicable State, Federal, and local laws, rules and regulations including Montana Human Rights Act, the Civil Rights Act of 1973, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973. Any subcontracting by Contractor must subject subcontractors to the same provisions. Any hiring of employees under this contract by Contractor shall be on the basis of merit and qualifications, and there shall be no discrimination in such hiring on the basis of race, color, sex, pregnancy, childbirth or medical conditions related to pregnancy or childbirth, political or religious affiliation or ideas, culture, creed, social origin or condition, genetic information, sexual orientation, gender identity or expression, national origin, ancestry, age, disability, military service or veteran status, or marital status. As used herein, "qualifications" mean qualifications as are generally related to competent performance of the particular occupational task. The Montana Department of Justice- Natural Resource Damage Program is an Equal Opportunity Employer.

Each bid or proposal must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the NRDP, in an amount not less than ten percent (10%) of the total amount of the bid. Successful Bidders shall furnish an approved Performance Bond and a Payment Bond, each in the amount of 100 percent (100%) of the contract amount. Insurance, as required, shall be provided by the successful Bidder(s) and a certificate(s) of that insurance shall be provided.

Bids may only be withdrawn as provided in Section 16 of the Instructions to Bidders. The right is reserved to reject any or all proposals received, to waive informalities not involving price, time, or changes in the Work, to postpone the award of the contract for a period not to exceed 60 days, and to accept the lowest responsive and responsible bid that is in the best interest of the Owner.

For general questions, contact Tom Mostad at (406) 444-0227. All questions about the meaning or intent of the Contract Documents are to be submitted in writing to and must be received by the Montana Department of Justice Natural Resource Damage Program, in Helena, Montana, no later than **5:00 P.M. local time December 8, 2017**. Questions submitted by mail should be labeled "Bid Questions Racetrack Pond Fishing Access Site and Habitat Improvement Project" and addressed to Bid Box, Attention: Tom Mostad, P.O. Box 201425, Helena, MT 59620-1425. Questions may also be e-mailed to tmostad2@mt.gov. Responses to questions will be posted at <https://dojmt.gov/lands/invitations-for-bids/> no later than **5:00 P.M. local time December 11, 2017**.

END OF SECTION

INFORMATION REQUIRED OF BIDDERS

(Required of All Bidders with submittal of Bids at time of Bid Opening)

The Bidder shall furnish the following information as specified in the Instructions To Bidders. Failure to do so will render the Bid unresponsive and may result in rejection of the Bid. Additional sheets as required may be attached.

1. Contractor's name and address:

2. Contractor's telephone number: _____

3. Names and titles of major officers of Contractor's firm:

4. Name of Contractor's representative who inspected the site:

Date of Inspection: _____

5. Name, address and telephone number of Surety Company and agent who will provide required bonds on this contract:

6. Attach a list including dates and location of two (2) similar jobs done in Montana or nearby states within the last 5 years, plus the name(s) of the primary equipment operator(s) who will work on the job, with specific references for their prior work. Bidder must include projects that were completed for NRDP. State the approximate cost of each project along with the total amount of change orders as a percentage of the original bid price.

7. Bank reference. List the Bank name, Contact person, and telephone number:

8. Have you ever failed to complete any work awarded to you? _____
If so, where and why? _____

9. Have you ever defaulted on a contract? _____
If so, where and why? _____

10. Have you ever had any project terminated by the Owner? _____
If so, where and why? _____

11. Are you involved in any lawsuits or are any lawsuits pending at the present time regarding the completion of any project you worked on?

If yes, give the details: _____

12. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? _____
13. Name of your proposed resident project superintendent:

Attach a resume of the proposed resident project superintendent including a list and description of all projects on which this individual has acted as project superintendent, along with the name, address, and telephone number of each project owner representative most familiar with the details of the project and the capabilities of the proposed project superintendent.

14. The Bidder shall list below the name, business address, and contractor's license number, if any, of each subcontractor who will be working on this project along with the nature and value of work assigned to each subcontractor. No changes or substitutions will be allowed without written approval of the Owner.

Name: _____	Value: _____

Name: _____	Value: _____

Name: _____	Value: _____

Name: _____	Value: _____

Name: _____	Value: _____

Name: _____	Value: _____
-------------	--------------

Name: _____

Value: _____

Name: _____

Value: _____

15. Name(s) of the primary equipment operator(s) who will work on the job, with specific references for their prior work.

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recital comprising this statement of Bidder's qualifications and other Information Required of Bidders. The undersigned further agrees that they will not bring suit in a court of law for any information that is furnished to Owner in good faith by said parties or persons responding to Owner's requests for information concerning Bidder's qualifications.

Dated this _____ day of _____, 20_____.

Name of Bidder

By: _____

Title: _____

END OF INFORMATION REQUIRED OF BIDDERS

NON-COLLUSION AFFIDAVIT

(TO BE EXECUTED AND PROVIDED WITH BID FORM)

STATE OF MONTANA _____)
) SS
COUNTY OF _____)

_____, being first duly sworn, deposes and says that he is
_____ (sole owner, a partner, president, secretary, etc.) of

_____,
the party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, nor that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, nor to fix any overhead, profit, or cost element of such bid price, nor of that of any other Bidder, nor to secure any advantage against the public body awarding the Contract or anyone interested in the proposed Contract; that all statements contained in such bid are true; and, further, that the Bidder has not directly or indirectly, submitted its bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with the Bidder in his general business.

Signed: _____

Title: _____

Subscribed and sworn to before me this _____ day
day of _____, 20 ____.

(SEAL)

Notary Public

INSTRUCTIONS TO BIDDERS

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ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued, Montana Department of Justice – Natural Resource Damage Program.
 - B. *Owner* – Montana Department of Justice – Natural Resource Damage Program (NRDP).
 - C. *Engineer* – Tetra Tech, Inc. (Tetra Tech).

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents may be obtained through the following link:
<https://dojmt.gov/lands/invitations-for-bids/>
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate the Bidder's qualifications to perform the Work, Contractor will be required to submit, **as part of bid**, all of the information in "Information Required of Bidders" form, including the dates and location of two (2) similar jobs done in Montana or nearby states within the last 5 years, plus the name(s) of the primary equipment operator(s) who will work on the job, with specific references for their prior work.
- 3.02 After submitting its Bid and within five (5) days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:
- A. Evidence of Bidder's authority to do business in the State of Montana.
 - B. Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."
- 3.03 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.04 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.05 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER’S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. Owner arranges access for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
 - 1. The Technical Specifications identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
 - 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Technical Specifications. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. If the Technical Specifications do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others. Owner makes no warranty as to the accuracy of the Underground Facilities.
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit through the mandatory pre-bid conference. Bidder must comply with all applicable site safety requirements during site visits or testing performed by Bidder.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner is able to arrange access with the owner of the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's ability to obtain access to the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill and compact all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions and specifications for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER'S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work including but not limited to those general and local conditions affecting transportation, disposal, handling and storage facilities, availability of labor, utilities, roads, climatic conditions and seasons, physical conditions at the Site and Project area as a whole, Site topography and ground conditions, equipment and facilities needed prior to and during execution of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Technical Specifications,

especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Technical Specifications, especially with respect to Technical Data in such reports and drawings;

- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents, and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE

- 6.01 A **mandatory** pre-Bid conference will be held at the time and location stated in the Invitation to Bid. Representatives of Owner and Engineer will be present to discuss the Project. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Owner or Engineer in writing no later than December 8, 2017 before the date of the bid opening. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received after December 8, 2017 will not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. All questions about the meaning or intent of the Contract Documents are to be submitted in writing to and must be received by the Montana Department of Justice Natural Resource Damage Program, in Helena, Montana, no later than **5:00 P.M.** local time on **December**

8, 2017. Questions submitted by mail should be labeled “Bid Questions Racetrack Pond Fishing Access Site and Habitat Improvement Project” and addressed to Bid Box, Attention: Tom Mostad, P.O. Box 201425, Helena, MT 59620-1425. Questions may be e-mailed to tmostad2@mt.gov. Responses to questions will be posted at <https://dojmt.gov/lands/invitations-for-bids/> no later than **5:00 P.M. local time December 11, 2017.**

- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.
- 7.03 Any addenda issued during the time of bidding must be covered in the Bid and included in the Contract Price in the Agreement. Receipt of each addendum must be acknowledged in the Bid. Any Bid in which all issued addenda are not acknowledged may be considered incomplete.
- 7.04 For general questions, contact Tom Mostad at (406) 444-0227. All questions about the meaning or intent of the Contract Documents are to be submitted in writing, as outlined in Article 7.01.

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 10 percent (10%) of Bidder’s maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (only on the form included in the Bidding Documents) issued by a surety authorized to do business in Montana and meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions. No Bid will be considered unless it is accompanied by the required Bid security.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security and insurance, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security and insurance within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the entire Bid security of that Bidder will be irrevocably forfeited to Owner as liquidated damages for such failure or neglect, and to indemnify Owner for any loss which may be sustained by failure of Bidder to execute the Agreement and furnish the bond and insurance. After execution of the Agreement and acceptance of the Bonds by Owner, the Bid Security accompanying the Bid Form will be returned. Such forfeiture shall be Owner’s exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by those Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIME

- 9.01 The number of days within which, or the dates by which, Milestones are to be achieved and the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

- 11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in a written Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.
- 11.02 Substitutes and “or-equal” materials and equipment may be proposed by Contractor in accordance with Paragraphs 7.04 and 7.05 of the General Conditions after the Effective Date of the Contract.
- 11.03 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- If requested by Owner, the apparent Successful Bidder will provide to Owner an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 12.03 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
 - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.
- 13.03 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.04 A Bid by an individual shall show the Bidder’s name and official address.
- 13.05 A Bid by a joint venture shall be executed by an authorized representative of each joint venture party in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.06 All names shall be printed in ink below the signatures.
- 13.07 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.08 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.09 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the State of Montana, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder’s current Montana Contractor’s registration number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID

- 14.01 *Unit Price and/or Lump Sum*
- A. Bidders shall submit a Bid on either a unit price basis or a lump sum basis for each item of Work listed in the bid schedule included in the Bid Form.
 - B. The Bid will not be considered unless the Bid Form is complete, containing all unit prices and/or lump sum prices for each Bid item included in the Bid Form, and Bids and totals are shown legibly in their proper locations. The total amount of the Bid shall be legibly written and numerically presented in the proper place, and the Bid Form shall be manually signed.
 - C. The “Bid Price” (sometimes referred to as the extended price) for each Bid item will be the product of the “Estimated Quantity” (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all Bid items will be the sum of these “Bid Prices”; such total will be used by Owner

for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

- D. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- E. The total Bid Price on the Bid Form shall be stated in both words and figures. Discrepancies between words and figures will be resolved in favor of words.

14.02 *Allowances*

- A. For cash allowances, the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the Invitation to Bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to the address shown in the Invitation to Bid.
 - A. A Bid will not be considered unless accompanied by the proper Bid Security in accordance with Article 8 of these Instructions to Bidders.
 - B. Bids, Bid Securities, or Bid modifications submitted by electronic transmission (such as fax or e-mail) will not be considered.
- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will be deemed nonresponsive, will not be accepted and will be returned to the Bidder unopened. The Bidder is absolutely responsible for delivery of the Bid by the required time, and Owner accepts no responsibility for the delivery.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 A Bid may only be withdrawn by written or faxed notification received by the Owner by the time fixed for opening, provided that Owner may, at its discretion, disregard any faxed withdrawal and

accept the related Bid, if an original, signed withdrawal is not received by Owner within two (2) working days after the Bid Opening. The Bid Security of any Bidder withdrawing its Bid in accordance with the foregoing conditions shall be returned as provided in these Instructions to Bidders.

- 16.04 Any Bid or modification received after the time and date specified shall not be considered. No Bidder may withdraw its Bid after the scheduled time for public opening of the Bids.

ARTICLE 17 – OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the Invitation to Bid and, unless obviously nonresponsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for sixty (60) days, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner determines, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.
- 19.06 Owner reserves the right, in its sole discretion, to cancel the contract solicitation for this project, to reject any and all Bids, to postpone or refuse to award the Contract, to consider the Bid of another Bidder, to waive any and all irregularities, and to take any other action it deems to be in the best interests of the State of Montana. The reasons therefore must be made a part of the

contract file. This reservation of rights to reject any and all Bids, specifically includes, but is not limited to:

- A. The right to disregard and reject any and all Bids that Owner determines are not in compliance with the requirements set out in these Instructions to Bidders.
- B. The right to disregard and reject any and all Bids that Owner determines to be untimely, nonconforming, nonresponsive or conditional.
- C. The right to disregard and reject any unbalanced Bid (a Bid which includes for any item a Bid Price that is considered abnormally low or high).
- D. The right to reject the Bid of any Bidder that Owner determines to be unqualified.
- E. The right to reject any Bid if the evidence submitted by, or the investigation of, such Bidder fails to satisfy Owner that such Bidder is properly qualified and likely to carry out the obligations of the Contract Documents and to satisfactorily complete the Work contemplated therein.
- F. The right to reject the Bid of any Bidder that Owner determines is not a responsible Bidder, as outlined in Article 19.07.

19.07 A. If it is to be awarded, the Contract will be awarded to the lowest responsible and eligible responsive Bidder (Successful Bidder) without regard to residency. Any determination of "nonresponsibility" shall be made in accordance with the language of §18-4-308, MCA and with the terms of the Instructions to Bidders. The term "lowest responsible and responsive Bidder" as used herein shall mean the Bidder whose Bid is the lowest of those Bidders possessing the demonstrated skill, ability and integrity necessary for the faithful and complete performance of the Work and meeting all other requirements set forth herein. To be considered a responsible Bidder, Bidder must have:

- 1. Financial resources, technical qualifications, experience, organization and facilities adequate to carry out the Project, or a demonstrated ability to obtain these;
 - 2. Resources to complete the Work within the Contract Time specified in the Agreement;
 - 3. A satisfactory performance record for completion of the Agreement
- B. Owner also may determine a Bidder is not a responsible Bidder on the basis of many factors, including but not limited to the following:
- 1. Uncompleted work on any current contract that Owner determines might hinder or prevent the prompt completion of the Work contemplated by the Contract Documents;
 - 2. Conduct which would constitute a default under any previous contracts (even if that owner did not declare contractor to be in default);
 - 3. Failure to pay within the timeframes required by law, all bills due for labor and materials on any current or previous contract(s);
 - 4. Unsatisfactory performance on a previous or current contract(s), including but not limited to:
 - a. Failure to comply with specifications;
 - b. Failure to work cooperatively with an owner or owner's oversight personnel;
 - c. Failure to complete Work within the Contract Time;

- d. Failure to adequately manage the construction site in accordance with contractor's Bid and proposed work schedule; and,
- e. Failure to comply with applicable legal requirements.

ARTICLE 20 – BONDS AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within 10 days thereafter, Owner shall deliver two fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.
- 21.02 Owner reserves the right in its sole discretion to postpone or refuse to issue the Notice to Proceed or to take any other action it deems to be in the best interests of the State of Montana. In such case, the decision to postpone or refuse to issue the Notice to Proceed will be treated as a decision by Owner to suspend the Work under Paragraph 16.01 of the General Conditions or to terminate the Contract for Owner's convenience under Paragraph 16.03 of the General Conditions, whichever is most appropriate. If Owner and Contractor cannot mutually agree to an equitable settlement for reimbursement of the reasonable expenses directly attributable to suspension or termination of the Work, the claim or dispute shall be submitted to Engineer with a request for an informal decision pursuant to the provisions of Paragraph 12.01 of the General Conditions

ARTICLE 22 – SAFETY AND HEALTH REQUIREMENTS

- 22.01 Contractor shall comply with the Department of Labor Safety and Health Regulations promulgated under the Occupational Safety and Health Act of 1970 (PL-91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-91-54). Contractor is solely responsible for initiating, maintaining, and supervising safety precautions and programs in connection with the Work. The right of the Owner and Engineer to observe or otherwise review the Work and operations shall not relieve the Contractor from any of his covenants and obligations hereunder. Contractor shall incorporate all safety requirements into their construction progress and work schedules including preconstruction and scheduled monthly safety meetings, posted safety rules, tailgate meetings, and site inspections by safety and other inspectors employed by the Contractor.
- 22.02 Contractor shall have a competent person or persons, as required under the Occupational Safety and Health Act, on the Site to inspect work at the site and to supervise the conformance of work with the regulations of the Act.

ARTICLE 23 – STATE LAWS AND REGULATIONS

- 23.01 All applicable laws, ordinances and the rules and regulations of authorities having jurisdiction over construction of the project shall apply to the Contract throughout. State laws and ordinances

which the Contractor must comply with, include but are not limited to, those involving workmen's compensation insurance, Contractor registration, and gross receipts tax.

- 23.02 Construction Contractors shall be registered in order to bid this project. Registration shall be per §39-9-201, Montana Code Annotated (MCA). All Contractors and Subcontractors over \$2,500 will be required to submit proof of registration with Department of Labor and Industry (DOLI).
- 23.03 Pursuant to §15-50-205, MCA, the Owner is required to withhold one (1) percent of all payments due the Contractor and is required to transmit such monies to the Montana Department of Revenue as part of the Public Contractor's Fee. In like fashion, the Contractor is required to withhold one (1) percent from payments to Subcontractors. Under the statute, these Public Contractor's Fees may be used against personal property taxes and certain fees paid on business equipment for a refund, or applied as a credit against the corporate license taxes or individual income taxes that Contractor owes.

ARTICLE 24 – WAGE REQUIREMENTS

- 24.01 In accordance with §§18-2-401 and 18-2-402, MCA, the Contractor and all Subcontractors must pay, as a minimum, the rate of wages as provided in the Montana Prevailing Wage Rates including fringe benefits and applicable zone pay. A copy of the current wage determination is included in the Project Manual.
- 24.02 In addition, in accordance with §18-2-422, MCA, the Contractor and all Subcontractors must maintain certified payrolls for a period of not less than 3 years from the completion of work and post a statement of all wages and fringe benefits at the site of the work.
- 24.03 The Contractor must also submit certified payrolls for all employees and employees of Subcontractors to the Engineer within one week of issuing each respective payroll.

ARTICLE 25 – DEBARMENT CERTIFICATION

- 25.01 The Bidder certifies that the Bidder's firm and the firm's principals are not debarred or suspended under any state or federal law, or otherwise ineligible to receive any Montana public works contracts of subcontracts pursuant to §18-2-432 (2), MCA.

ARTICLE 26 – EQUAL EMPLOYMENT OPPORTUNITY

- 26.01 The Contractor and Subcontractors must fully comply with all applicable State, Federal, and local laws, rules and regulations including Montana Human Rights Act, the Civil Rights Act of 1973, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973. Any subcontracting by Contractor must subject subcontractors to the same provisions. Any hiring of employees under this contract by Contractor shall be on the basis of merit and qualifications, and there shall be no discrimination in such hiring on the basis of race, color, sex, pregnancy, childbirth or medical conditions related to pregnancy or childbirth, political or religious affiliation or ideas, culture, creed, social origin or condition, genetic information, sexual orientation, gender identity or expression, national origin, ancestry, age, disability, military service or veteran status, or marital status. As used herein, "qualifications" mean qualifications as are generally related to competent performance of the particular occupational task. Standard Terms and Conditions
- 26.02 **COLLUSION PROHIBITED:** The Bidder's signature on its bid guarantees the prices quoted have been established without collusion with other eligible bidders and without effort to preclude the NRDP from obtaining the lowest possible competitive price.

- 26.03 CONFORMANCE WITH CONTRACT: No alteration of the terms, conditions, delivery, price, quality, quantities or specifications shall be granted without Owner's prior written consent. Supplies delivered which do not conform to the contract documents may be rejected and returned at Contractor's expense.
- 26.04 CONTRACT AWARD: Owner intends to award this contract to the lowest responsive and responsible Bidder (§18-1-102, MCA), subject to that law's provisions regarding resident bidders.
- 26.05 CONTRACT REFERENCE: The NRDP Contract number shall be referred to on all invoices, pay requests, contract forms, correspondence and any other documents relating to the Work to be done under the contract.
- 26.06 CONTRACT TERMINATION: Owner shall have the absolute right to terminate the contract in whole or in part pursuant to Article 16 of the General Conditions.
- 26.07 DELIVERY/SHIPPING: Unless otherwise specified in the contract documents, all supplies shall be shipped prepaid, F.O.B. destination to the site of the Work.
- 26.08 PROTEST PROCEDURE: Bidders may protest a solicitation or award of a contract determined to be in violation of law. The protest must be in writing and explain in detail all of the protester's objections. A protest involving the solicitation or award of a contract must follow the provisions of § 18-4-242, MCA, except that protests here must be made to the NRDP Lawyer/Program Manager. Owner is under no obligation to delay, halt or modify the procurement process due to a protest.
- 26.09 SETTLEMENT PROCEDURES AS CONDITIONS PRECEDENT TO SUIT: The claims and resolution procedures set forth in Articles 12 and 17 of the General Conditions and Article 17 of the Supplementary Conditions are the Owner's contractual, administrative procedures under §18-1-402, MCA, for settlement of any question, claim, dispute or other matter arising between Owner and Contractor under the Contract Documents. Under the Specifications, Engineer's informal and formal decisions shall be conditions precedent to any exercise by Owner or Contractor of such rights and remedies as either might otherwise have under the Contract Documents or at Law or in Equity with respect to any question, claim, dispute or other matter arising under the Contract Documents.
- 26.10 UNAVAILABILITY OF FUNDING: Owner at its sole discretion may terminate or reduce the scope of the contract if available funding is reduced or is otherwise for any reason not available.
- 26.11 VENUE: Any claim or dispute arising out of an express contract entered into with the NRDP shall be governed by the laws of Montana. The parties agree that any litigation concerning such claim or dispute may only be brought in the First Judicial District in and for the County of Lewis & Clark, State of Montana.

ARTICLE 27 – NOTICE OF APPROVAL OF PAYMENT REQUEST PROVISION

- 27.01 These Contract Documents and this Contract allow the OWNER to review and approve each CONTRACTOR's periodic payment request within 30 days after the request is received by the OWNER.

ARTICLE 28 – - NOTICE OF EXTENDED PAYMENT PROVISION

- 28.01 These Contract Documents and this Contract allow the OWNER to make periodic payments within 10 days after the OWNER's approval of each periodic payment request.

END OF SECTION

SECTION 00400

BID FORM

PROJECT IDENTIFICATION:

Racetrack Pond Fishing Access Site and Habitat Improvement Project

Powell County

CONTRACT NUMBER:

700103

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ARTICLE 1 – BID RECIPIENT

- 1.01 This Bid is submitted to:

*State of Montana – Department of Justice
Natural Resource Damage Program (NRDP)
1720 9th Avenue, P.O. Box 201425
Helena, MT 59620*

- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:

- A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

- B. Bidder makes the representations and acknowledgments contained in Article 8 of the Agreement, has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, attended the mandatory pre-bid conference, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

ARTICLE 4 – BIDDER’S CERTIFICATION

- 4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
- 4.02 Bidder certifies that no official of the Owner, Engineer, or any member of such official’s immediate family has direct or indirect interest in the pecuniary profits or Contracts of the Bidder.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

BID FORM**Racetrack Pond Fishing Access Site and Habitat Improvement Project**

<i>BID ITEM</i>	<i>ESTIMATED QUANTITY</i>	<i>UNIT</i>	<i>DESCRIPTION</i>	<i>UNIT PRICE</i>	<i>TOTAL PRICE</i>
1	1	LS	Mobilization, Bonding, and Insurance		
2	1	LS	Develop and Reclaim Staging Area		
3	1	LS	Debris Removal, Clearing and Grubbing		
Erosion Controls					
4	1	LS	Soil Erosion and Sediment Control		
5	80	Day	Provide Water for Dust Control		
Dewatering					
6	2	EA	Dewatering Sediment Ponds		
7	2	EA	Dewatering Sumps		
8	450	Units	Dewatering Sump Operation		
9	4,400	LF	Dewatering Trenches		
Boat Ramp					
10	145	SY	Construct Boat Ramp		
Racetrack Pond Habitat Improvements					
11	179,000	CY	Regrade Pond		
12	1	LS	Provide and Install Pond Outlet Structure		
13	545	LF	Construct Outlet Channel		
14	14,700	CY	Load, Haul, and Place On-site Vegetative Backfill		
15	4,000	CY	Load, Haul, and Place Beck Borrow Vegetative Backfill		
Gravel Parking Area and Access Road					
16	530	CY	Provide, Place, and Compact Road Base		
17	18	EA	Provide and Install Concrete Wheel Stops		
18	55	EA	Provide and Install Barriers Rocks		
Construct Gravel Trail					
19	525	CY	Provide, Place, and Compact Road Base		
Install Pit Latrine					
20	1	LS	Install Pre-cast Pit Latrine (Missoula Concrete)		
ADA Platform					
21	1	LS	Provide and Install ADA Platform Foundation		
22	1	LS	Provide and Construct ADA Platform Deck		
Seeding and Planting					
23	23	Acre	Hand Broadcast Seeding		
24	16	Acre	Drill Seeding		
25	26,000	SF	Wetland Sod Salvage, Storage and Transplant		
BID TOTAL (\$):					

TOTAL BID PRICE IN WORDS:

5.02 Bidder acknowledges that:

- A. Bid Unit Prices have been computed in accordance with Article 13 of the General Conditions;
- B. Each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item;
- C. Estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents;
- D. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices;
- E. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum;
- F. Discrepancies between words and figures will be resolved in the favor of words; and
- G. The Owner reserves the right to reject any or all Bids.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages and payments to Owner for Unscheduled Employment of the Engineer.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security in the amount of 10% of the maximum Bid price including alternates, if any, and in the form of a Bid Bond (Section 00430), or other form of Bid Security as identified in the Instructions to Bidders;

Surety. If the Bidder is awarded a construction Contract on this Bid Form, the Surety who provides the Performance Bond and Payment Bond will be: _____ whose address is:

Street	City	State	Zip
--------	------	-------	-----

- B. Dates and location of two (2) similar jobs done in Montana or nearby states within the last five years, plus the name(s) of the primary equipment operator(s) who will work on the job, with specific references for their prior work;
- C. List of Proposed Subcontractors;
- D. List of Proposed Suppliers;
- E. Evidence of authority to do business in the State of Montana;
- F. Contractor's License No.: [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;

G. Non-Collusion Affidavit.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

Verification

I certify under penalty of perjury that I am the individual authorized to submit the attached bid, that I have personally examined and am familiar with the information submitted in this disclosure and all attachments, and that based on my inquiry of these persons immediately responsible for obtaining the information contained in this disclosure, I believe that the information is true, accurate and complete.

Signature

Title

Date

(NOTARIZED)

By:

[Signature] _____

[Printed name] _____

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number:

Contact Name and e-mail address:

Bidder's Montana Contractor's License No.:

Tax ID Number:

END OF SECTION

BID BOND

KNOW ALL MEN BY THESE PRESENTS that

_____, as Bidder, and
(Name of Contractor)

_____, as Surety, a corporation duly
(Name of Surety)

organized under the laws of the State of _____ and licensed to do business in this State, are held and bound unto the Department of Justice Natural Resource Damage Program (the Obligee) in the sum of ten percent (10%) of the amount bid by Bidder for the Obligee's Project Number _____, for payment of which the Bidder and Surety bind themselves, jointly and severally.

Surety and Bidder understand and agree that this Bond has been requested, and is here given, as bid security under the provisions of §18-1-201 *et seq* and §18-2-302, MCA. This Bond is submitted as a condition precedent for Obligee's consideration of Bidder's bid, as evidence of Bidder's good faith (e.g., complying with Obligee's bid procedures, such as providing bid documentation), and to fully indemnify the Obligee for Obligee's benefit against any possible failure or refusal by the Bidder to enter into any written contract that may be awarded to it by the Obligee following the Obligee's acceptance of the Bidder's bid.

The Bidder expressly covenants that it will not withdraw the bid herewith submitted, will comply with the provisions of the "Invitation for Bid" and, if it is awarded the contract, will, within five (5) days of the date of the "Notice of Award" letter, enter into the required written contract, and will give a good and sufficient bond to secure the performance of the terms and conditions of the contract.

THE CONDITIONS OF THIS OBLIGATION ARE THAT:

if Obligee accepts the bid of Bidder and Bidder fails to timely enter into a written contract with Obligee for this project, or fails to give bond with good and sufficient surety for the faithful performance of the contract; **or**, in the event of the failure of Bidder to demonstrate its good faith (i.e., by failing to enter into the contract, failing to give the bond or necessary insurance, etc.),

then this obligation shall be in full force and effect, and the bid bond shall be subject to immediate forfeiture. Otherwise, if Bidder fully complies with the requirements of the "Invitation to Bid", this obligation shall be null and void.

Signed this _____ day of _____, 201__

Name of Bidder

SEAL (if applicable)

** By: _____

Name of Surety Company

SEAL

** By: _____

Title: _____

**** THIS BOND MUST BE SIGNED BY A DULY AUTHORIZED REPRESENTATIVE OF THE SURETY AND THE BIDDER. UNSIGNED BONDS ARE NOT RESPONSIVE AND A BID WILL BE REJECTED IF THE BOND IS NOT PROPERLY SIGNED BY BOTH.**

NOTE: A copy of the agent's Power of Attorney for the Surety Company must be attached to this bond form.

NDRP Bid Bond

SECTION 00500

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT

THIS AGREEMENT is by and between State of Montana – Department of Justice,
Natural Resource Damage Program (NRDP) (“Owner”) and
____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Provide all labor, materials, earthwork and incidentals necessary to perform the Work as shown on the Drawings and described in the Technical Specifications. The Work consists but is not limited to dewatering Racetrack Pond, regrading of the pond area, mixing owner-provided compost with onsite vegetated backfill, loading and hauling of Beck Borrow vegetative backfill, mixing of owner-provided compost with Beck Borrow vegetative backfill, placement of compost-amended vegetated backfill (both onsite and Beck Borrow), construction and installation of a pond outlet structure, construction of an outlet channel and construction and installation of Fishing Access Site Amenities (FAS), including access roads, walking trails, boat launch, parking area, fishing access platform and pit latrine (precast pit latrine to be supplied by others, but installed as part of this project).

ARTICLE 2 – THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

Racetrack Pond Fishing Access Site and Habitat Improvement Project

ARTICLE 3 – ENGINEER

- 3.01 The Project has been designed by Tetra Tech, Inc. (Tetra Tech).
- 3.02 The Owner has retained Tetra Tech (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIME

- 4.01 *Time of the Essence*
- A. All time limits for Milestones, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Time: Days*
- A. The Work will be substantially completed within one hundred and twenty (120) days after the date when the Contract Time commences to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with

Paragraph 15.06 of the General Conditions within fifteen (15) days after the date of substantial completion.

- B. All work that requires dewatering within the pond area must be complete by no later than April 15, 2018 in order to avoid problems from increased water due to irrigation activities. Contractor is absolutely responsible for all costs, delays, damages, and penalties, over and above any imposed liquidated damages, occurring from work delay past April 15, 2018.

4.03 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving the actual loss suffered by Owner if the Work is not completed on time, and agree that it would be impracticable or extremely difficult to fix actual damages in advance. Accordingly, instead of requiring any such proof, the parties have agreed that a liquidated damage provision is both appropriate and necessary and that the liquidated damage amounts specified herein are reasonable and good faith estimates of the anticipated and probable damages the Owner will incur should Contractor fail to complete the Work within the times specified herein. The Parties have agreed on the following sum presumed to be the daily amount of damage sustained by a breach. Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
 - 1. Substantial Completion: Contractor shall pay Owner \$1,000.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
 - 2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$1,000.00 for each day that expires after such time until the Work is completed and ready for final payment.
 - 3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

4.04 *Special Damages*

- A. In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Time, including failure to complete work that requires dewatering within the pond area by April 15, 2018, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.
- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount equal to the sum of the established lump sum prices and unit prices for each Bid item from the Bid Form multiplied by the actual quantity of the respective Bid item constructed and accepted equal to the sum of _____ dollars (\$), based on the prices stipulated in the Bid Form and subject to adjustments as provided in the Contract Documents.
- A. Contractor agrees that the total amount in Article 5.01 constitutes full payment for the Work and that these amount(s) represent a true measure of the labor and materials required to perform the Work as provided in Paragraph 13.01 of the General Conditions. All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the Contract Documents.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment monthly during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
 - a. Ninety five percent (95%) of Work completed (with the balance being retainage); and
 - b. Ninety five percent (95%) of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion of the entire construction to be provided under the Contract Documents, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent (100%) of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent (200%) of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment. In addition, one percent (1%) of all payments due the Contractor as the statutory Gross Receipts Tax shall be withheld from this and all other progress payments. In like fashion, the Contractor is required to withhold one (1) percent from payments to Subcontractors.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06, less the Gross Receipts Tax.

ARTICLE 7 – INTEREST

- 7.01 All amounts not paid when due shall bear interest at the maximum rate allowed by law at the place of the Project.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Technical Specifications, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Technical Specifications, especially with respect to Technical Data in such reports and drawings. Contractor acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site.
 - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor’s safety precautions and programs.
 - F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 - G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
 - H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.
- K. This is a public works project. Neither Contractor, nor any of its subcontractors, suppliers, materialmen or employees, nor anyone on behalf of any of them, may file any kind of levy or lien, whether construction lien, mechanic's lien, or any other type of lien, levy or encumbrance, against this project or any of the work that will be accomplished on it. Contractor commits that it will so inform its potential subcontractors, suppliers, and materialmen of this requirement, informing them that, if they do not so agree, Contractor will not allow them to perform work on, or provide supplies or materials for, this project.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 8, inclusive).
 - 2. Invitation to Bid (pages 1 to 3, inclusive).
 - 3. Instructions to Bidders (pages 1, 1 to 13, inclusive).
 - 4. Bid Form (pages i, 1 to 7, inclusive).
 - 5. Bid Bond (pages 1 to 1, inclusive).
 - 6. Performance Bond (pages 1 to 3, inclusive).
 - 7. Payment Bond (pages 1 to 3, inclusive).
 - 8. Other bonds: None.
 - 9. Approved Insurance certifications.
 - 10. General Conditions (pages i-v, 1 to 65, inclusive).
 - 11. Supplementary Conditions (pages 1 to 17, inclusive).
 - 12. Montana Prevailing Wage Rates – Heavy Construction Services 2017 (pages 1 to 15, inclusive).
 - 13. Specifications as listed in the table of contents of the Project Manual.
 - 14. Drawings included as Appendix A of the Project Manual consisting of 26 sheets with each sheet bearing the following general title: *NRDP, Racetrack Pond Fishing Access Site and Habitat Improvement Project*.
 - 15. Addenda (numbers ____ to ____, inclusive).
 - 16. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages ____ to ____, inclusive).
 - 17. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.

- b. Work Change Directives.
- c. Change Orders.
- d. Field Orders.

18. Permits, Approved and Pending.

- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Specifications.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of

Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

OWNER:

State of Montana – Department of Justice
Natural Resource Damage Program (NRDP)

CONTRACTOR:

By: _____

By: _____

Title: _____

Title: _____

(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

License No.: _____

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

END OF SECTION

STANDARD FORMS

NOTICE OF AWARD

Date of Issuance:

Owner:

Owner's Contract No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Bidder:

Bidder's Address:

TO BIDDER:

You are notified that Owner has accepted your Bid dated [] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is: \$ [] *[note if subject to unit prices, or cost-plus]*

[] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically. *[revise if multiple copies accompany the Notice of Award]*

☐ a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of this Notice of Award:

1. Deliver to Owner [] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security *[e.g., performance and payment bonds]* and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner:

Authorized Signature

By:

Title:

Copy: Engineer

NOTICE TO PROCEED

Owner:	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer:	Engineer's Project No.:
Project:	Contract Name:
	Effective Date of Contract:

TO CONTRACTOR:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [_____, 20____]. *[see Paragraph 4.01 of the General Conditions]*

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, [the date of Substantial Completion is _____, and the date of readiness for final payment is _____] **or** [the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before starting any Work at the Site, Contractor must comply with the following:
[Note any access limitations, security procedures, or other restrictions]

Owner:

Authorized Signature

By:

Title:

Date Issued:

Copy: Engineer

PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence,

to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims

for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(seal)

Contractor's Name and Corporate Seal

By: _____

Signature

Print Name

Title

Attest: _____

Signature

Title

(seal)

Surety's Name and Corporate Seal

By: _____

Signature *(attach power of attorney)*

Print Name

Title

Attest: _____

Signature

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and

8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

Contractor's Application for Payment No. _____

Application Period:		Application Date:
To (Owner):	From (Contractor):	Via (Engineer):
Project:	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

Application For Payment

Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS		
NET CHANGE BY		
CHANGE ORDERS		

1. ORIGINAL CONTRACT PRICE.....	\$ _____
2. Net change by Change Orders.....	\$ _____
3. Current Contract Price (Line 1 ± 2).....	\$ _____
4. TOTAL COMPLETED AND STORED TO DATE	
(Column F total on Progress Estimates).....	\$ _____
5. RETAINAGE:	
a. 5% X _____ Work Completed.....	\$ _____
b. X _____ Stored Material.....	\$ _____
c. Total Retainage (Line 5.a + Line 5.b).....	\$ _____
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c).....	\$ _____
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$ _____
8. GROSS AMOUNT DUE THIS APPLICATION.....	\$ _____
9. 1% MT GROSS RECEIPTS TAX (1% x line).....	\$ _____
10. UNSCHEDULED EMPLOYMENT OF THE ENGINEER.....	\$ _____
11. BALANCE TO FINISH, PLUS RETAINAGE	
(Column G total on Progress Estimates + Line 5.c above).....	\$ _____

Contractor's Certification The undersigned Contractor certifies, to the best of its knowledge, the following: (1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment; (2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and (3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.	
Contractor Signature By: _____ Date: _____	

Payment of:	\$ _____	(Line 8 - 9 - 10 or other - attach explanation of the other amount)
is recommended by:	_____	_____
	(Engineer)	(Date)
Payment of:	\$ _____	(Line 8 - 9 - 10 or other - attach explanation of the other amount)
is approved by:	_____	_____
	(Owner)	(Date)
Approved by:	_____	_____
	Funding or Financing Entity (if applicable)	(Date)

Progress Estimate - Unit Price Work

Contractor's Application

[illegible]

Stored Material Summary

Contractor's Application

[illegible]

Unscheduled Employment of the Engineer

[illegible]

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer:	Engineer's Project No.:
Project:	Contract Name:

This [preliminary] [final] Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities: ☐ None
☐ As follows

Amendments to Contractor's responsibilities: ☐ None
☐ As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER:	RECEIVED:	RECEIVED:
By: _____ (Authorized signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Work Change Directive No.

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Contractor is directed to proceed promptly with the following change(s):

Description:

Attachments: *[List documents supporting change]*

Purpose for Work Change Directive:

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

- ☐ Non-agreement on pricing of proposed change.
- ☐ Necessity to proceed for schedule or other Project reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price \$ _____ [increase] [decrease].

Contract Time	days	[increase] [decrease].
---------------	------	------------------------

Basis of estimated change in Contract Price:

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> Lump Sum | <input type="checkbox"/> Unit Price |
| <input type="checkbox"/> Cost of the Work | <input type="checkbox"/> Other |

RECOMMENDED:

AUTHORIZED BY:

RECEIVED:

By:

Engineer (Authorized Signature)

By:

Owner (Authorized Signature)

By:

Contractor (Authorized Signature)

Title:

Title:

Title:

Date:

Date:

Date:

Approved by Funding Agency (if applicable)

By:

Date:

Title:

Change Order No. _____

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (if required)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____
Title: _____

Date: _____

Field Order No. _____

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 11.01, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification(s)

Drawing(s) / Detail(s)

Description:

Attachments:

ISSUED:

RECEIVED:

By:

Engineer (Authorized Signature)

By:

Contractor (Authorized Signature)

Title:

Title:

Date:

Date:

Copy to: Owner

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. abnormal weather conditions;
 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part

by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

- c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after

becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 - 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 - 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is

maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
 - 1. include at least the specific coverages provided in this Article.
 - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 - 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
- d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or

exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to

provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples:*

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.

- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or anyone for whom Owner is responsible, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during

or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on

the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.04.C.2.a and 11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim

submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes

other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will

include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 - 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 - 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
 - 1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 - 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

- 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount

remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

- A. *Application for Payment:*
 - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of

inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses,

and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for

expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 00800

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01 *Defined Terms*

- SC-1.01.A Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

Abnormal Weather Conditions – Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season will not be considered Abnormal Weather Conditions.

Owner – Add at the end of the definition: The Owner for this project includes the Montana Department of Justice, Natural Resources Damage Program, the State of Montana, and their officers, elected officials, employees, and agents.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.01 *Delivery of Bonds and Evidence of Insurance*

- SC-2.01 Delete Paragraphs 2.01.A, B, and C in their entirety and insert the following in their place:

- A. *Bonds*: Engineer shall furnish to Contractor six copies of the Agreement and other Contract Documents bound therewith. Contractor shall execute the Agreement, attach executed copies of the required Bonds and Power of Attorney and submit all copies to Engineer who will forward them to the Owner. Owner shall execute all copies and return two copies to the Contractor. Owner shall also furnish two counterparts or conformed copies to the Engineer and shall retain two copies.
- B. *Evidence of Contractor's Insurance*: When Contractor delivers the executed counterparts of the Agreement to Engineer, Contractor shall also deliver to Engineer copies of the policies of insurance (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in Article 6.

SC-2.02 *Copies of Documents*

- SC-2.02.A Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor five copies of the Contract Documents (including two fully executed counterparts of the Agreement), and one copy in Adobe® format (PDF).

Additional copies of Drawings and Project Manuals may be obtained through the following link:

<https://dojmt.gov/lands/invitations-for-bids/>

SC-2.03 *Before Starting Construction*

SC-2.03.A Add the following new paragraph immediately after Paragraph 2.03.A.3:

4. a preliminary list of construction equipment with hourly rates, owned or rented by the Contractor and all Subcontractors that will be used in the performance of the Work. The equipment list will include information necessary to confirm the hourly rates per the General Conditions and SC-13.01.B.5.c, including make, model, and year of manufacture as well as the horse power, capacity or weight, and accessories.

SC-2.05 *Initial Acceptance of Schedules*

SC-2.05.A Delete Paragraph 2.05.A in its entirety and insert the following in its place:

- A. Prior to the first application for payment all schedules and documents identified in paragraph 2.03.A shall be finalized and acceptable to the Engineer and Owner. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer and Owner as provided below. Acceptance of these schedules and documents by either Engineer or Owner will neither impose on Engineer or Owner responsibility for the sequencing, scheduling or progress of the Work and will not interfere with or relieve Contractor from Contractor's full responsibility therefore.

SC-2.05.A Add the following new paragraph immediately after Paragraph 2.05.A.3:

4. Contractor's Schedule of Construction Equipment will be acceptable to Engineer as to form and substance if it provides the necessary information to reference the equipment and establish the hourly rates in accordance with the General Conditions and SC-13.01.B.5.c.

SC-2.06 *Electronic Submittals*

SC-2.06.A Add the following new paragraph immediately after Paragraph 2.06.A:

1. Electronic data for Shop Drawings and other submittals may be relied upon if done in accordance with Section 01300.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.03.B *Resolving Discrepancies*

Add the following new paragraph immediately after Paragraph 3.03.B.1.b:

SC 3.03.B.1.c In the event that any provision of the Contract Documents conflicts with another provision of the Contract Documents, the provision in the Contract Documents first listed below shall generally govern , except as otherwise specifically stated:

1. Agreement;
2. Performance and Payment Bond;
3. Addenda to Contract Documents;
4. Legal and Procedural Documents;
 - a. Instructions to Bidders;
 - d. Invitation to Bid;
5. Technical Specification
6. Drawings
7. Supplementary Conditions
9. General Conditions

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01.A Replace the first sentence of Paragraph 4.01.A as follows:

Following the execution of the Agreement by the Owner and the Contractor, written Notice to Proceed with the Work shall be given by the Owner to the Contractor. The Contract Time will commence to run on the day indicated in the Notice to Proceed.

SC-4.02 Starting the Work

SC-4.02.A Delete the second sentence and insert the following in its place:

No Work shall be done on the project before that date.

SC-4.04 *Progress Schedule*

SC-4.04.A Delete Paragraph 4.04.A.1 in its entirety and insert the following in its place:

1. Contractor shall submit to Engineer with each application for payment an updated progress schedule reflecting the amount of work completed and adjustments to future work. Such adjustments will be acceptable to Engineer as providing an orderly progression of the Work to completion within any specified milestones and the Contract Time, and will not change the Contract Time. No progress payment will be made to Contractor until the updated schedules are submitted to and acceptable to Engineer and Owner. Review and acceptance of progress schedules by the Engineer will neither impose on Engineer responsibility for the sequencing, scheduling or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefore.

SC-4.05 *Delays in Contractors' Progress*

SC-4.05.C Amend the first sentence by replacing the word "shall" with "may".

SC-4.05.C.2 Amend Paragraph 4.05.C.2 by striking out the following words "abnormal weather conditions;" and inserting the following words "Abnormal Weather Conditions;"

SC-4.05.C.3 Amend the paragraph by adding, immediately before the semi-colon, the words, "so long as those acts or failures to act were not the result of Contractor's failure to provide

required notice to the utility owners, in which case any delay, disruption or interference will be considered the responsibility of the Contractor”.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.01 Availability of Lands

SC-5.01.B Delete the entire paragraph.

SC-5.01 Add the following new paragraph at the end of Paragraph 5.01.C:

If it is necessary or desirable that the Contractor use land outside of the Owner’s easement or right-of-way, the Contractor must obtain prior consent from the property owner and tenant of the land. The Contractor shall not enter for materials delivery or occupy for any other purpose with workers, tools, equipment, construction materials, or with materials excavated from the site, any private property outside the designated construction easement boundaries or right-of-way without written permission from the property owner and tenant.

SC-5.03 Subsurface and Physical Conditions

SC-5.03.A Amend the first sentence of Paragraph 5.03.A to read as follows:

A. *Reports and Drawings:* The Technical Specifications identify (if applicable):

SC-5.03.B Amend the first sentence of Paragraph 5.03.B to read as follows:

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Technical Specifications (if applicable) with respect to such reports and drawings, but such reports and drawings are not Contract Documents.

SC-5.04 Differing Subsurface or Physical Conditions

SC-5.04.A Add the following new paragraphs at the end of Paragraph 5.04.A:

Contractor will notify Owner and Engineer in writing about claimed differing subsurface or physical conditions within one (1) day of discovery and before disturbing the subsurface as stated above.

No claim for an adjustment in the contract price or contract time will be valid for differing subsurface or physical conditions if procedures of this Paragraph 5.04 are not followed.

SC-5.05 Underground Facilities

SC-5.05.A Add the following new paragraph immediately after Paragraph 5.05.A.2.d:

3. At least 2 but not more than 10 business days before beginning any excavation, the Contractor shall, in accordance with MCA 69-4-501, notify all owners of underground facilities and coordinate the Work with the owners of such underground facilities. The information shown or indicated in the Contract Documents with respect to existing underground facilities is based on information and data obtained from the owners of the facilities without field exploration, and as such, Owner and Engineer are not responsible for the accuracy or completeness of such information or data.

SC-5.06 Hazardous Environmental Conditions

SC-5.06.A Amend the first sentence of Paragraph 5.06.A to read as follows:

A. *Reports and Drawings:* The Technical Specifications identify (if applicable):

SC-5.06.B Amend the first sentence of Paragraph 5.06.B to read as follows:

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Technical Specifications (if applicable) with respect to such reports and drawings, but such reports and drawings are not Contract Documents.

ARTICLE 6 – BONDS AND INSURANCE

SC-6.01 Performance, Payment, and Other Bonds

SC-6.01.E Delete Paragraph 6.01.E in its entirety and insert the following in its place:

E. If Contractor fails to obtain a required bond within 15 days after the Notice of Award, Owner may exclude the Contractor from the Site, and Owner may consider Bidder to be in default, annul the Notice of Award, and the entire Bid security of that Bidder will be irrevocably forfeited to Owner, as provided for in section 8.02 of the Instructions to Bidders.

SC-6.02 Insurance—General Provisions

SC-6.02.B Delete Paragraph 6.02.B in its entirety and insert the following in its place:

B. Without limiting any of the other obligations or liabilities of the Contractor, Contractor shall secure and maintain insurance from an insurance company (or companies) authorized to write insurance in the State of Montana, with minimum “A.M. Best Rating” of A-VI, as will protect the Contractor, the vicarious acts of subcontractors, the State of Montana, the Owner, their elected and appointed officials, agents, and employees and the Engineer and their agents and employees from claims for bodily injury, death, personal injury, property damage, contractual liability, and financial or other loss of any kind that in any way, directly or indirectly, arise or allegedly arise out of or in connection with this Agreement. This provision requires Contractor to purchase and maintain general liability insurance that includes protection for Contractor’s (and its subcontractors’) acts or omissions, alleged acts or omissions, negligent conduct, and alleged negligent conduct. Contractor shall not commence work under this Agreement until the insurance has been obtained and certificates of insurance, with binders, or certified copies of the insurance policy shall have been filed with the Owner and the Engineer.

All insurance coverages must remain in effect throughout the life of the Agreement, except that the Contractor shall maintain the Commercial General Liability Policy including product and completed operations coverage for a period of at least one year following the substantial completion date for property damage resulting from occurrences during the agreement period. Contractor agrees that it will not terminate or modify any of the insurance coverage, or allow any of it to be terminated or modified, without first having notified in writing all of the insureds, including additional insureds, and obtained their written permission to do so.

SC-6.02.C Delete Paragraph 6.02.C in its entirety and insert the following in its place:

- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), copies of the insurance policies that Contractor has obtained.

SC-6.03 Contractor's Insurance

SC-6.03.A Delete subparagraphs 2, 3 and 4.

SC-6.03.D Delete paragraph 6.03.D and replace with the following:

- D. Automobile Liability. For the duration of this Contract and for a period of at least one year after Final Payment, Contractor shall purchase and maintain project specific business automobile liability insurance covering any automobile—including all owned, hired and non-owned automobiles – used in connection with Contractor's business. Business automobile liability insurance shall be written on a standard ISO form or other form providing equivalent liability coverage. Contractor may purchase and maintain non-project specific business automobile liability insurance, but only if the limits of the insurance apply separately to the project location or are twice the limits stated below. Contractor shall require each of its sub-contractors to purchase and maintain identical business automobile liability insurance.

SC-6.03.G Add the following new paragraph at the end of Paragraph 6.03.G:

The Contractor's insurance coverage shall name the Owner, Engineer and Engineer's Consultants, Landowner, the State, and associated officers, officials, employees and volunteers of above entities as an additional insured under Commercial General Liability, Automobile Liability, Excess or Umbrella policies.

SC-6.03.I Amend Paragraph 6.03.I.3 by striking out the words "10 days" and replacing them with the words "45 days", and as so amended, Paragraph 6.03.I.3 remains in effect.

SC-6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

- K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>
Jones Act coverage, if applicable:	
Bodily injury by accident, each accident	\$ <u> </u>
Bodily injury by disease, aggregate	\$ <u> </u>
Employer's Liability:	\$ <u>500,000</u>
Bodily injury, each accident	\$ <u> </u>
Bodily injury by disease, each employee	\$ <u> </u>
Bodily injury/disease aggregate	\$ <u> </u>

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	\$ <u>2,000,000</u>
Products - Completed Operations Aggregate	\$ <u>2,000,000</u>
Personal and Advertising Injury	\$ _____
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>1,000,000</u>

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:

Each person	\$ <u>500,000</u>
Each accident	\$ <u>1,000,000</u>

Property Damage:

Each accident	\$ <u>1,000,000</u>
[or]	
Combined Single Limit of	\$ <u>1,000,000</u>

4. Excess or Umbrella Liability:

Per Occurrence	\$ <u>1,000,000</u>
General Aggregate	\$ <u>2,000,000</u>

5. Contractor's Pollution Liability:

Each Occurrence	\$ _____
General Aggregate	\$ _____



If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Contractor's Professional Liability:

Each Claim	\$ _____
Annual Aggregate	\$ _____



If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

SC-6.04 Owner's Liability Insurance

SC-6.04.A Delete Section 6.04 in its entirety.

SC-6.05 Property Insurance

SC-6.05 Delete Section 6.05.A in its entirety and insert the following in its place:

- A. Contractor shall purchase and maintain property insurance upon the work at the site in the amount of 100% replacement cost thereof (subject to such deductible amounts as may be provided in these Supplementary Conditions or required by Laws and Regulations). ("100% replacement cost" means the full cost of replacement at the same site with new material of like kind and quality without deduction for depreciation.) This insurance shall:
1. Include the interests of Owner, Contractor, Subcontractors, Sub-Subcontractors, Engineer, Engineer's Consultants, and any other persons or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
 2. Be written on a Builder's Risk "all risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, false work and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than caused by floods), and other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. Include expenses incurred in the repair or replacement of any insured property (including but not limited to the fees and charges of engineers and architects);
 4. Cover materials and equipment in transit for incorporation in the Work or stored at the site or at another location prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. Be endorsed to allow occupancy and partial utilization of the Work by Owner;
 6. Include testing and start-up; and
 7. Be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with thirty days written notice to each other additional insured to whom a certificate of insurance has been issued.
 8. Contractor shall be responsible for any deductible or self-insured retention.
 9. The policies of insurance required to be purchased and maintained by Contractor in accordance with this paragraph shall comply with the requirements of Paragraph 6.05.B of the General Conditions.

10. The policies of insurance required to be purchased and maintained by Contractor in accordance with this paragraph shall comply with the requirements of Paragraph 6.05.B of the General Conditions. The qualifications of the insurance company shall comply with the requirements of SC-6.02.B.

SC-6.06 Waiver of Rights

SC-6.06 Delete paragraphs 6.06.B and C in their entirety.

ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

SC-7.06 Concerning Subcontractors, Suppliers, and Others

SC-7.06.D Amend the first sentence of Paragraph 7.06.D to read as follows:

Within five (5) days of Owner’s request, Contractor shall identify Subcontractors, Suppliers, or other individuals or entities as may be called for by the Owner.

SC-7.12 Safety and Protection

SC-7.12.C Amend the second sentence of Paragraph 7.12.C by striking out the words “Supplementary Conditions” and replacing them with the words “Technical Specifications”.

SC-7.12.F Add following new paragraphs immediately after Paragraph 7.12.G:

- H. It is expressly understood by the parties to this Agreement that the Contractor is solely responsible for initiating, maintaining, and supervising safety precautions and programs in connection with the Work. The right of the Owner and Engineer to observe or otherwise review the Work and operations shall not relieve the Contractor from any of its covenants and obligations hereunder. Contractor shall incorporate all safety requirements into its construction progress and work schedules including preconstruction and scheduled monthly safety meetings, posted safety rules, tailgate meetings, and site inspections by safety and other inspectors employed by the Contractor.
- I. The Contractor shall be responsible for and shall take necessary precautions and provide all material and equipment to protect, shore, brace, support and maintain all underground pipes, conduits, drains, sewers, water mains, gas mains, cables, etc., and other underground construction uncovered in the proximity, or otherwise affected by the construction work performed by him. All pavement, surfacing, driveways, curbs, walks, buildings, grass areas, trees, utility poles or guy wires damaged by the Contractor’s operations in the performance of this work shall be repaired and/or replaced to the satisfaction of the Owner, Engineer, and affected property owner at the Contractor’s expense. The Contractor shall also be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property or facility, regardless of location or character, which may be caused by moving, hauling, or otherwise transporting equipment, materials, or workers to and from the work or any part of site thereof; whether by Contractor or its subcontractors. The Contractor shall make satisfactory and acceptable arrangements with owner of, or the agency or authority having jurisdiction over, the damaged property or facility concerning its repair or replacement or payment of costs incurred in connection with said damage.

- J. The Contractor shall conduct its work so as to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct, or close roads, driveways, and walks, whether public or private, the Contractor shall obtain approval from the governing party and shall, at its own expense, provide and maintain suitable and safe bridges, detours, and other temporary expedients for the accommodation of public and private drives before interfering with them. The provisions for temporary expedients will not be required when the Contractor has obtained permission from the owner and tenant of the private property, or from the authority having jurisdiction over public property involved, to obstruct traffic at the designated point.
- J. Safety provisions must be entirely adequate and meet with City or State and Federal regulations to protect the public on these streets and roads.

SC-7.18 *Indemnification*

SC-7.18.A Delete the paragraph in its entirety and replace with the following:

To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or mediation or other dispute resolution costs) arising or allegedly arising out of or relating or allegedly relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom. While Owner and Engineer have the right under this Contract to observe or otherwise review the work, progress and operations of the Contractor, it is expressly understood and agreed that such observation shall not relieve the Contractor from any of its covenants and obligations hereunder.

ARTICLE 9 – OWNER’S RESPONSIBILITIES

SC-9.06 *Insurance*

SC-9.06.A Delete Paragraph 9.06.A in its entirety.

SC-9.11 *Evidence of Financial Arrangements*

SC-9.11.A Delete Paragraph 9.11.A in its entirety.

SC-9.13 *Owner’s Site Representative*

SC-9.13.A Add the following new paragraph immediately after Paragraph 9.12:

A. SC-9.13 Owner will furnish an “Owner’s Site Representative” to periodically represent Owner at the Site and assist Owner in observing the progress and quality of the Work.

The Owner's Site Representative is not Engineer's consultant, agent, or employee. Owner's Site Representative will be Beau Downing, NRDP.

10.01 Owner's Representative

SC-10.01 Delete 10.01 and replace with the following:

- A. Engineer will be Owner's representative during the construction period although, if present, the "Owner's Site Representative" will also represent the Owner. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

SC-10.03 *Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.A:

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
 1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
 4. Liaison:
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
 5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
 6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

- c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
- 7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
- 8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
- 9. Inspections, Tests, and System Start-ups:
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- 10. Records:
 - a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
 - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
 - c. Maintain records for use in preparing Project documentation.
- 11. Reports:
 - a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.

- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
 - c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.
- 12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
- 13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
- 14. Completion:
 - a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
 - b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
 - c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.
- C. The RPR shall not:
 - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.

8. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 12 – CLAIMS

SC-12.01 Claims

Delete all references to “arbitration” in the Standard General Conditions.

SC-12.01.A

Insert the following after subparagraph 12.01.A.3

4. The Contractor or Owner may request non-binding, independent third party mediation. The Contractor’s request for third party mediation must be submitted in writing to the Engineer no more than 5 calendar days after the date of a decision by the Engineer. If the Owner and Contractor both agree to mediation, they must mutually agree on a mediator and a mediation date within 10 calendar days of the date of the written request for mediation. All costs associated with mediation will be shared equally between the Contractor and the Owner.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC-13.01 Cost of the Work

SC-13.01.B.1 “Legal holidays” here, and anywhere it may be stated in the Contract Documents, refers to the holidays listed in §1-1-216, MCA.

SC-13.01.B.5.c Delete paragraph 13.01.B.5.c in its entirety and insert the following in its place:

- c. The rental of all construction equipment and machinery and parts thereof whether rented from contractor or rented from others. The cost shall be calculated as follows and will include the costs of transportation, loading, unloading, assembly, dismantling and removal thereof for equipment involved only in the changed portion of the work covered under the cost of the Work method. Transportation, loading and assembly costs will not be included for equipment already on the site which is being used for other portions of the Work. The cost of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work. Hourly equipment and machinery rates shall be calculated from the Rental Rate Blue Book for Construction Equipment, and the Equipment List submitted according to SC-2.03 and SC-2.05, and as follows:
 1. for working equipment, the hourly rate shall be the monthly rental rate divided by 176 hours per month plus the hourly operating cost.
 2. for equipment on standby, the hourly rate shall be 50% of the monthly rental rate divided by 176 hours per month, and the hourly operating cost shall not be applied.
 3. for specialized equipment rented for a short duration used for change order work or additional work not part of the scope of work bid, the equipment rental rates will be negotiated prior to the work being performed.

SC-13.03 Unit Price Work

SC 13.03.E Delete Paragraph 13.03.E in its entirety and insert the following in its place:

- E. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:
1. if the extended price of a particular item of Unit Price Work amounts to more than ten percent (10%) of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than twenty five percent (25%) from the estimated quantity of such item indicated in the Agreement; and
 2. if there is no corresponding adjustment with respect to any other item of Work; and
 3. if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract Price.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

SC-15.01 Progress Payments

SC-15.01.B.1 Add the following new paragraph at the end of Paragraph 15.01.B.1:

Payments for materials in storage shall be based only upon the actual cost of the materials and equipment to Contractor and shall not include any overhead or profit. Bill of Sale, invoice or other document warranting clear title for materials in storage will be waived for the material in storage included in the first progress payment application. However, proof of payment and clear title must be submitted with Application No. 2 for all material included in Application No. 1. Without such documentation amounts paid for materials in storage will be deducted from subsequent payments. Beginning with the second application, all requests for payment for materials in storage shall be accompanied by Bill of Sale, invoice or other document warranting clear title as required above.

SC-15.01.B.3 Add the following new paragraphs at the end of Paragraph 15.01.B.3:

Retainage may be used by the Owner to offset costs for any of the losses enumerated in Paragraphs 15.01.C.6.a through 15.01.C.6.e inclusive, 15.01.E.1.a through 15.01.E.1.l inclusive, or 16.02.E. In addition, retainage may be used by the Owner to protect against loss from failure by the Contractor to complete necessary work and to offset any liquidated damages due Owner.

SC-15.01.B.4 Add the following new paragraph after Paragraph 15.01.B.3:

4. Each application for progress payment shall be accompanied by Contractor's updated progress schedule, shop drawing schedule, procurement schedule, and other data specified herein or reasonably required by Owner or Engineer. The Owner reserves the right to require submission of monthly certified payrolls by the Contractor.

SC-15.01.D.1 Delete Paragraph 15.01.D.1 in its entirety and insert the following in its place:

1. The Owner will, upon presentation of the Contractor's Application for Payment with Engineer's recommendation, review and act upon that request once each month on or about the day of each month stipulated by the Owner at the preconstruction conference. Payment will become due when Owner approves the application for payment and when due, will be paid by Owner to Contractor.

SC-15.01.E.1 Add the following language at the end of the first sentence of Paragraph 15.01.E.1:

, including liquidated damages.

SC-15.02 Contractor's Warranty of Title

SC-15.02.B Add the following new paragraph immediately after Paragraph 15.02.A:

- B. Neither recommendation of any progress payment by Engineer nor payment by the Owner to Contractor, nor any use or occupancy of the Work or any part thereof will release the Contractor from complying with the Contract Documents. Specifically the Contractor shall maintain, in accordance with Article 6, property insurance on all Work, materials, and equipment whether incorporated in the project or not and whether included in an application for payment or not, for the full insurable value thereof. Passing title to Owner for materials and equipment included in an application for payment does not relieve the Contractor of the Contractor's obligation to provide insurance (including property insurance) as required in Article 6 of the General Conditions and these Supplementary Conditions. All insurance must remain in effect as provided in Article 6.

SC-15.04 Partial Use or Occupancy

SC-15.04 Add the following new paragraph immediately after Paragraph 15.04.A.4:

- B. Owner has the right to take possession of or use any completed or substantially completed portions of the work at any time, but such taking possession or use will not be deemed an acceptance of any work not completed in accordance with the Contract Documents. Owner's use of any facilities so identified in the Contract Documents will not be grounds for extension of the contract time or change in the contract price. Owner's use of any facilities not specifically identified in the Contract Documents will be in accordance with conditions agreed to prior to such use, and any extra costs or delays in completion incurred and properly claimed by Contractor will be equitably adjusted with a Change Order. Facilities substantially completed in accordance with the Contract Documents which are occupied or used by Owner prior to substantial completion of the entire work will be done in accordance with General Conditions 15.03. Guarantee periods for accepted or substantially completed work including mechanical and electrical equipment will commence upon the start of continuous use by Owner. All tests and instruction of Owner's personnel must be satisfactorily completed, and Owner shall assume responsibility for and operation of all facilities occupied or used except as may arise through portions of work not yet completed by Contractor. If the work has been substantially completed and the Engineer certifies that full completion thereof is materially delayed through no fault of the Contractor, the Owner shall, without terminating the Agreement, make payment of the balance due for the portion of the work fully completed and accepted.

SC-15.05 Final Inspection

SC-15.05 Add the following new paragraph immediately after Paragraph 15.05.A:

- B. After Contractor has remedied all deficiencies to the satisfaction of the Engineer and delivered all construction records, maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, and other documents (all as required by the Contract Documents), Owner and Contractor shall be promptly notified in writing by Engineer that the work is acceptable.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

SC-17.03 Attorneys' Fees

SC-17.03 Add the following new paragraph as Paragraph 17.01.C:

- C. Attorneys' Fees: For any matter subject to final resolution under this Article, other than mediation, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, mediator, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18 – MISCELLANEOUS

SC-18.01 Giving Notice

SC-18.01 Add the following new paragraph immediately after Paragraph 18.01.A:

- B. The mailing address for giving notices to Contractor given in the Agreement is hereby designated as the place to which all notices, letters, and other communication to Contractor will be mailed or delivered. The mailing address for giving notices to Owner given in the Agreement is hereby designated as the place to which all notices, letters, and other communication to Owner shall be mailed or delivered. Either party may change its address at any time by an instrument in writing delivered to Engineer and to other party.

MONTANA
PREVAILING WAGE RATES FOR HEAVY CONSTRUCTION SERVICES 2017

Effective: January 7, 2017

Steve Bullock, Governor
State of Montana

Pam Bucy, Commissioner
Department of Labor and Industry

To obtain copies of prevailing wage rate schedules, or for information relating to public works projects and payment of prevailing wage rates, visit ERD at www.mtwagehourbopa.com or contact:

Employment Relations Division
Montana Department of Labor and Industry
P. O. Box 201503
Helena, MT 59620-1503
Phone 406-444-5600
TDD 406-444-5549

The Labor Standards Bureau welcomes questions, comments, and suggestions from the public. In addition, we'll do our best to provide information in an accessible format, upon request, in compliance with the Americans with Disabilities Act.

MONTANA PREVAILING WAGE REQUIREMENTS

The Commissioner of the Department of Labor and Industry, in accordance with Sections 18-2-401 and 18-2-402 of the Montana Code Annotated (MCA), has determined the standard prevailing rate of wages for the occupations listed in this publication.

The wages specified herein control the prevailing rate of wages for the purposes of Section 18-2-401, et seq., MCA. It is required that each employer pay (as a minimum) the rate of wages, including fringe benefits, travel allowance, zone pay and per diem applicable to the district in which the work is being performed as provided in the attached wage determinations.

All Montana Prevailing Wage Rates are available on the internet at www.mtwagehourbopa.com or by contacting the Labor Standards Bureau at (406) 444-5600 or TDD (406) 444-5549.

In addition, this publication provides general information concerning compliance with Montana's Prevailing Wage Law and the payment of prevailing wages. For detailed compliance information relating to public works contracts and payment of prevailing wage rates, please consult the regulations on the internet at www.mtwagehourbopa.com or contact the Labor Standards Bureau at (406) 444-5600 or TDD (406) 444-5549.

PAM BUCY
Commissioner
Department of Labor and Industry
State of Montana

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A. Date of Publication January 7, 2017

B. Definition of Heavy Construction

The Administrative Rules of Montana (ARM), 24.17.501(4) – (4)(a), states “*Heavy construction projects include, but are not limited to, those projects that are not properly classified as either ‘building construction’, or ‘highway construction.’*”

Heavy construction projects include, but are not limited to, antenna towers, bridges (major bridges designed for commercial navigation), breakwaters, caissons (other than building or highway), canals, channels, channel cut-offs, chemical complexes or facilities (other than buildings), cofferdams, coke ovens, dams, demolition (not incidental to construction), dikes, docks, drainage projects, dredging projects, electrification projects (outdoor), fish hatcheries, flood control projects, industrial incinerators (other than building), irrigation projects, jetties, kilns, land drainage (not incidental to other construction), land leveling (not incidental to other construction), land reclamation, levees, locks and waterways, oil refineries (other than buildings), pipe lines, ponds, pumping stations (prefabricated drop-in units – not buildings), railroad construction, reservoirs, revetments, sewage collection and disposal lines, sewers (sanitary, storm, etc.), shoreline maintenance, ski tows, storage tanks, swimming pools (outdoor), subways (other than buildings), tipples, tunnels, unsheltered piers and wharves, viaducts (other than highway), water mains, waterway construction, water supply lines (not incidental to building), water and sewage treatment plants (other than buildings) and wells.”

C. Definition of Public Works Contract

Section 18-2-401(11)(a), MCA defines “public works contract” as “...*a contract for construction services let by the state, county, municipality, school district, or political subdivision or for nonconstruction services let by the state, county, municipality, or political subdivision in which the total cost of the contract is in excess of \$25,000...*”.

D. Prevailing Wage Schedule

This publication covers only Heavy Construction occupations and rates in the specific localities mentioned herein. These rates will remain in effect until superseded by a more current publication. Current prevailing wage rate schedules for Building Construction, Highway Construction and Nonconstruction Services occupations can be found on the internet at www.mtwagehourbopa.com or by contacting the Labor Standards Bureau at (406) 444-5600 or TDD (406) 444-5549.

E. Rates to Use for Projects

ARM, 24.17.127(1)(c), states “*The wage rates applicable to a particular public works project are those in effect at the time the bid specifications are advertised.*”

F. Wage Rate Adjustments for Multiyear Contracts

Section 18-2-417, MCA states:

“(1) Any public works contract that by the terms of the original contract calls for more than 30 months to fully perform must include a provision to adjust, as provided in subsection (2), the standard prevailing rate of wages to be paid to the workers performing the contract.

(2) The standard prevailing rate of wages paid to workers under a contract subject to this section must be adjusted 12 months after the date of the award of the public works contract. The amount of the adjustment must be a 3% increase. The adjustment must be made and applied every 12 months for the term of the contract.

(3) Any increase in the standard rate of prevailing wages for workers under this section is the sole responsibility of the contractor and any subcontractors and not the contracting agency.”

G. Fringe Benefits

Section 18-2-412, MCA states:

“(1) To fulfill the obligation...a contractor or subcontractor may:

(a) pay the amount of fringe benefits and the basic hourly rate of pay that is part of the standard prevailing rate of wages directly to the worker or employee in cash;

(b) make an irrevocable contribution to a trustee or a third person pursuant to a fringe benefit fund, plan, or program that meets the requirements of the Employee Retirement Income Security Act of 1974 or that is a bona fide program approved by the U. S. department of labor; or

(c) make payments using any combination of methods set forth in subsections (1)(a) and (1)(b) so that the aggregate of payments and contributions is not less than the standard prevailing rate of wages, including fringe benefits and travel allowances, applicable to the district for the particular type of work being performed.

(2) The fringe benefit fund, plan, or program described in subsection (1)(b) must provide benefits to workers or employees for health care, pensions on retirement or death, life insurance, disability and sickness insurance, or bona fide programs that meet the requirements of the Employee Retirement Income Security Act of 1974 or that are approved by the U. S. department of labor.”

Fringe benefits are paid for all hours worked (straight time and overtime hours). However, fringe benefits are not to be considered a part of the hourly rate of pay for calculating overtime, unless there is a collectively bargained agreement in effect that specifies otherwise.

H. Dispatch City

ARM, 24.17.103(11), defines dispatch city as *“...the courthouse in the city from the following list which is closest to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, and Missoula.”*

I. Zone Pay

Zone pay is not travel pay. ARM, 24.17.103(24), defines zone pay as *“...an amount added to the base pay; the combined sum then becomes the new base wage rate to be paid for all hours worked on the project. Zone pay must be determined by measuring the road miles one way over the shortest practical maintained route from the dispatch city to the center of the job.”* See section H above for a list of dispatch cities.

J. Computing Travel Benefits

ARM, 24.17.103(22), states *“ ‘Travel pay,’ also referred to as ‘travel allowance,’ is and must be paid for travel both to and from the job site, except those with special provisions listed under the classification. The rate is determined by measuring the road miles one direction over the shortest practical maintained route from the dispatch city or the employee's home, whichever is closer, to the center of the job.”* See section H above for a list of dispatch cities.

K. Per Diem

ARM, 24.17.103(18), states *“ ‘Per diem’ typically covers costs associated with board and lodging expenses. Per diem is paid when an employee is required to work at a location outside the daily commuting distance and is required to stay at that location overnight or longer.”*

L. Apprentices

Wage rates for apprentices registered in approved federal or state apprenticeship programs are contained in those programs. Additionally, Section 18-2-416(2), MCA states, *“...The full amount of any applicable fringe benefits must be paid to the apprentice while the apprentice is working on the public works contract.”* Apprentices not registered in approved federal or state apprenticeship programs will be paid the appropriate journey level prevailing wage rate when working on a public works contract.

M. Posting Notice of Prevailing Wages

Section 18-2-406, MCA, provides that contractors, subcontractors, and employers who are “...performing work or providing construction services under public works contracts, as provided in this part, shall post in a prominent and accessible site on the project or staging area, not later than the first day of work and continuing for the entire duration of the project, a legible statement of all wages and fringe benefits to be paid to the employees.”

N. Employment Preference

Sections 18-2-403 and 18-2-409, MCA require contractors to give preference to the employment of bona fide Montana residents in the performance of work on public works contracts.

O. Projects of a Mixed Nature

Section 18-2-408, MCA states:

“(1) The contracting agency shall determine, based on the preponderance of labor hours to be worked, whether the public works construction services project is classified as a highway construction project, a heavy construction project, or a building construction project.

(2) Once the project has been classified, employees in each trade classification who are working on that project must be paid at the rate for that project classification”

P. Occupations Definitions

You can find definitions for these occupations on the following Bureau of Labor Statistics website:

http://www.bls.gov/oes/current/oes_stru.htm

Q. Welder Rates

Welders receive the rate prescribed for the craft performing an operation to which welding is incidental.

R. Foreman Rates

Rates are no longer set for foremen. However, if a foreman performs journey level work, the foreman must be paid at least the journey level rate.

WAGE RATES

BOILERMAKERS

Wage	Benefit
\$30.25	\$30.30

Duties Include:

Construct, assemble, maintain, and repair stationary steam boilers, boiler house auxiliaries, process vessels, pressure vessels and penstocks. Bulk storage tanks and bolted steel tanks.

Travel:

0-120 mi. free zone
>120 mi. federal mileage rate/mi.

Special Provision:

Travel is paid only at the beginning and end of the job.

Per Diem:

0-70 mi. free zone
>70-120 mi. \$55.00/day
>120 mi. \$70.00/day

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BRICK, BLOCK, AND STONE MASONS

Wage	Benefit
\$31.07	\$13.90

Travel:

0-20 mi. free zone
>20-35 mi. \$30.00/day
>35-55 mi. \$35.00/day
>55 mi. \$65.00/day

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CARPENTERS

Wage	Benefit
\$29.00	\$11.82

Zone Pay:

0-30 mi. free zone
>30-60 mi. base pay + \$4.00/hr.
>60 mi. base pay + \$6.00/hr.

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CEMENT MASONS AND CONCRETE FINISHERS

Wage	Benefit
\$21.73	\$10.51

Duties Include:

Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, or curbs. Align forms for sidewalks, curbs, or gutters.

Zone Pay:

0-30 mi. free zone
>30-60 mi. base pay + \$2.95/hr.
>60 mi. base pay + \$4.75/hr.

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CONSTRUCTION EQUIPMENT OPERATORS GROUP 1

Wage	Benefit
\$25.41	\$12.05

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.50/hr.
>60 mi. base pay + \$5.50/hr.

This group includes but is not limited to:

Air Compressor; Auto Fine Grader; Belt Finishing; Boring Machine (Small); Cement Silo; Crane, A-Frame Truck Crane; Crusher Conveyor; DW-10, 15, and 20 Tractor Roller; Farm Tractor; Forklift; Form Grader; Front-End Loader, under 1 cu. yd; Oiler, Heavy Duty Drills; Herman Nelson Heater; Mucking Machine; Oiler, All Except Cranes/Shovels; Pumpman.

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CONSTRUCTION EQUIPMENT OPERATORS GROUP 2

Wage	Benefit
\$26.20	\$12.05

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.50/hr.
>60 mi. base pay + \$5.50/hr.

This group includes but is not limited to:

Air Doctor; Backhoe\Excavator\Shovel, up to and incl. 3 cu. yds; Bit Grinder; Bituminous Paving Travel Plant; Boring Machine, Large; Broom, Self-Propelled; Concrete Travel Batchers; Concrete Float & Spreader; Concrete Bucket Dispatcher; Concrete Finish Machine; Concrete Conveyor; Distributor; Dozer, Rubber-Tired, Push, & Side Boom; Elevating Grader\Gradall; Field Equipment Serviceman; Front-End Loader, 1 cu. yd up to and incl. 5 cu. yds; Grade Setter; Heavy Duty Drills, All Types; Hoist\Tugger, All; Hydralift Forklifts & Similar; Industrial Locomotive; Motor Patrol (except finish); Mountain Skidder; Oiler, Cranes\Shovels; Pavement Breaker, EMSCO; Power Saw, Self-Propelled; Pugmill; Pumpcrete\Grout Machine; Punch Truck; Roller, other than Asphalt; Roller, Sheepsfoot (Self-Propelled); Roller, 25 tons and over; Ross Carrier; Rotomill, under 6 ft; Trenching Machine; Washing /Screening Plant

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CONSTRUCTION EQUIPMENT OPERATORS GROUP 3

Wage	Benefit
\$27.95	\$12.05

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.50/hr.
>60 mi. base pay + \$5.50/hr.

This group includes but is not limited to:

Asphalt Paving Machine; Asphalt Screed;
Backhoe\Excavator\Shovel, over 3 cu. yds; Cableway
Highline; Concrete Batch Plant; Concrete Curing
Machine; Concrete Pump; Cranes, Creter; Cranes,
Electric Overhead; Cranes, 24 tons and under; Curb
Machine\Slip Form Paver; Finish Dozer; Front-End
Loader, over 5 cu. yds; Mechanic\Welder; Pioneer
Dozer; Roller Asphalt (Breakdown & Finish); Rotomill,
over 6 ft; Scraper, Single, Twin, or Pulling Belly-Dump;
YO-YO Cat.

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CONSTRUCTION EQUIPMENT OPERATORS GROUP 4

Wage	Benefit
\$28.95	\$12.05

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.50/hr.
>60 mi. base pay + \$5.50/hr.

This group includes but is not limited to:

Asphalt\Hot Plant Operator; Cranes, 25 tons up to and
incl. 44 tons; Crusher Operator; Finish Motor Patrol;
Finish Scraper.

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CONSTRUCTION EQUIPMENT OPERATORS GROUP 5

Wage	Benefit
\$29.95	\$12.05

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.50/hr.
>60 mi. base pay + \$5.50/hr.

This group includes but is not limited to:

Cranes, 45 tons up to and incl. 74 tons.

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CONSTRUCTION EQUIPMENT OPERATORS GROUP 6

Wage	Benefit
\$30.95	\$12.05

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.50/hr.
>60 mi. base pay + \$5.50/hr.

This group includes but is not limited to:

Cranes, 75 tons up to and incl. 149 tons; Cranes,
Whirley (All).

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CONSTRUCTION EQUIPMENT OPERATORS GROUP 7

Wage	Benefit
\$31.95	\$12.05

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.50/hr.
>60 mi. base pay + \$5.50/hr.

This group includes but is not limited to:

Cranes, 150 tons up to and incl. 250 tons; Cranes, over 250 tons—add \$1.00 for every 100 tons over 250 tons; Crane, Tower (All); Crane Stiff-Leg or Derrick; Helicopter Hoist.

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CONSTRUCTION LABORERS GROUP 1/FLAG PERSON FOR TRAFFIC CONTROL

Wage	Benefit
\$21.58	\$8.69

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.05/hr.
>60 mi. base pay + \$4.85/hr.

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CONSTRUCTION LABORERS GROUP 2

Wage	Benefit
\$24.40	\$8.69

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$3.05/hr.
>60 mi. base pay + \$4.85/hr.

This group includes but is not limited to:

General Labor; Asbestos Removal; Burning Bar; Bucket Man; Carpenter Tender; Caisson Worker; Cement Mason Tender; Cement Handler (dry); Chuck Tender; Choker Setter; Concrete Worker; Curb Machine-lay Down; Crusher and Batch Worker; Heater Tender; Fence Erector; Landscape Laborer; Landscaper; Lawn Sprinkler Installer; Pipe Wrapper; Pot Tender; Powderman Tender; Rail and Truck Loaders and Unloaders; Riprapper; Sign Erection; Guardrail and Jersey Rail; Spike Driver; Stake Jumper; Signalman; Tail Hoseman; Tool Checker and Houseman and Traffic Control Worker.

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CONSTRUCTION LABORERS GROUP 3

Wage	Benefit
\$24.54	\$8.69

This group includes but is not limited to:

Concrete Vibrator; Dumpman (Graderman); Equipment Handler; Geotextile and Liners; High-Pressure Nozzleman; Jackhammer (Pavement Breaker) Non-Riding Rollers; Pipelayer; Posthole Digger (Power); Power Driven Wheelbarrow; Rigger; Sandblaster; Sod Cutter-Power and Tamper.

Zone Pay:

0-30 mi. free zone
>30-60 mi. base pay + \$3.05/hr.
>60 mi. base pay + \$4.85/hr.

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CONSTRUCTION LABORERS GROUP 4

Wage	Benefit
\$25.26	\$8.69

This group includes but is not limited to:

Hod Carrier***; Water Well Laborer; Blaster; Wagon Driller; Asphalt Raker; Cutting Torch; Grade Setter; High-Scaler; Power Saws (Faller & Concrete) Powderman; Rock & Core Drill; Track or Truck Mounted Wagon Drill and Welder incl. Air Arc.

Zone Pay:

0-30 mi. free zone
>30-60 mi. base pay + \$3.05/hr.
>60 mi. base pay + \$4.85/hr.

***Hod Carriers will receive the same amount of travel and/or subsistence pay as bricklayers when requested to travel.

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DIVERS

	Wage	Benefit
Stand-By	\$38.16	\$14.52
Diving	\$76.32	\$14.52

Depth Pay (Surface Diving)

0-20 ft.	free zone
>20-100 ft.	\$2.00 per ft.
>100-150 ft.	\$3.00 per ft.
>150-220 ft.	\$4.00 per ft.
>220 ft.	\$5.00 per ft.

Diving In Enclosures

0-25 ft.	free zone
>25-300 ft.	\$1.00 per ft.

Zone Pay:

0-30 mi. free zone
>30-60 mi. base pay + \$4.00/hr.
>60 mi. base pay + \$6.00/hr.

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DIVER TENDERS

Wage	Benefit
\$37.16	\$14.52

The tender shall receive 2 hours at the straight time pay rate per shift for dressing and/or undressing a Diver when work is done under hyperbaric conditions.

Zone Pay:

0-30 mi. free zone
>30-60 mi. base pay + \$4.00/hr.
>60 mi. base pay + \$6.00/hr.

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ELECTRICIANS

Wage	Benefit
\$32.74	\$13.45

Travel:

No mileage due when traveling in employer's vehicle.

The following travel allowance is applicable when traveling in employee's vehicle:

0-18 mi. free zone
>18-60 mi. federal mileage rate/mi.
>60 mi. \$75.00/day

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HEATING AND AIR CONDITIONING

Wage	Benefit
\$28.04	\$17.38

Duties Include:

Testing and balancing, commissioning and retro-commissioning of all air-handling equipment and duct work.

Travel:

0-50 mi. free zone
>50 mi.

- \$0.25/mi. in employer vehicle.
- \$0.65/mi. in employee vehicle.

Per Diem:

\$65/day

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INSULATION WORKERS - MECHANICAL (HEAT AND FROST)

Wage	Benefit
\$34.17	\$19.47

Duties Include:

Insulate pipes, ductwork or other mechanical systems.

Travel:

- 0-30 mi. free zone
- >30-40 mi. \$20.00/day
- >40-50 mi. \$30.00/day
- >50-60 mi. \$40.00/day
- >60 mi. \$45.00/day plus
 - \$0.56/mi. if transportation is not provided.
 - \$0.20/mi. if in company vehicle.
- >60 mi. \$80.00/day on jobs requiring an overnight stay plus
 - \$0.56/mi. if transportation is not provided.
 - \$0.20/mi. if in company vehicle.

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IRONWORKERS - STRUCTURAL STEEL AND REBAR PLACERS

Wage	Benefit
\$27.25	\$23.16

Duties Include:

Structural steel erection; assemble prefabricated metal buildings; cut, bend, tie, and place rebar; energy producing windmill type towers; metal bleacher seating; handrail fabrication and ornamental steel.

Travel:

- 0-45 mi. free zone
- >45-85 mi. \$55.00/day
- >85 mi. \$85.00/day

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LINE CONSTRUCTION – EQUIPMENT OPERATORS

Wage	Benefit
\$33.27	\$14.71

Duties Include:

All work on substations

Zone Pay:

- No Free Zone
- \$60.00/day

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LINE CONSTRUCTION – GROUNDMAN

Wage	Benefit
\$25.98	\$13.31

Duties Include:

All work on substations

Zone Pay:

- No Free Zone
- \$60.00/day

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LINE CONSTRUCTION – LINEMAN

Wage	Benefit
\$43.43	\$15.30
Duties Include:	
All work on substations	

Zone Pay:
No Free Zone
\$60.00/day

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MILLWRIGHTS

Wage	Benefit
\$32.00	\$11.82

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + \$4.00/hr.
>60 mi. base pay + \$6.00/hr.

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PAINTERS

Wage	Benefit
\$25.05	\$16.72

Travel:
No mileage due when traveling in employer's vehicle.

The following travel allowance is applicable when traveling in employee's vehicle:

No free zone.
\$0.60/mi.

Per Diem:
\$80.00/day

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PILE BUCKS

Wage	Benefit
\$29.00	\$11.82

Duties Include:

Set up crane; set up hammer; weld tips on piles; set leads; insure piles are driven straight with the use of level or plum bob. Give direction to crane operator as to speed, and direction of swing. Cut piles to grade.

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Zone Pay:

0-30 mi. free zone
>30-60 mi. base pay + \$4.00/hr.
>60 mi. base pay + \$6.00/hr.

PLUMBERS, PIPEFITTERS, AND STEAMFITTERS

Wage	Benefit
\$35.66	\$16.86

Duties Include:

Assemble, install, alter, and repair pipe-lines or pipe systems that carry water, steam, air, other liquids or gases. Testing of piping systems, commissioning and retro-commissioning. Workers in this occupation may also install heating and cooling equipment and mechanical control systems.

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Travel:

0-70 free zone
>70 mi.

- On jobs when employees do not work consecutive days: \$0.55/mi. if employer doesn't provide transportation. Not to exceed two trips.
- On jobs when employees work any number of consecutive days: \$100.00/day if employer doesn't provide transportation.

SHEET METAL WORKERS

Wage	Benefit
\$28.04	\$17.38

Duties Include:

Testing and balancing, commissioning and retro-commissioning of all air-handling equipment and duct work. Manufacture, fabrication, assembling, installation, dismantling, and alteration of all HVAC systems, air veyer systems, and exhaust systems. All lagging over insulation and all duct lining. Metal roofing.

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Travel:

0-50 mi. free zone
>50 mi.

- \$0.25/mi. in employer vehicle
- \$0.65/mi. in employee vehicle

Per Diem:

\$65.00/day

TEAMSTERS GROUP 1 (Pilot Car Drivers)

No Rate Established

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TEAMSTERS GROUP 2 (Truck Drivers)

No Rate Established

This group includes but is not limited to:

Combination Truck and Concrete Mixer and Transit Mixer; Dry Batch Trucks; Distributor Driver; Dumpman; Dump Trucks and similar equipment; Dumpster; Flat Trucks; Lumber Carriers; Lowboys; Pickup; Powder Truck Driver; Power Boom; Serviceman; Service Truck/Fuel Truck/Tireperson; Truck Mechanic; Trucks with Power Equipment; Warehouseman, Partsman, Cardex and Warehouse Expeditor; Water Trucks.

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TECHNICAL SPECIFICATIONS

These technical specifications address all anticipated construction, dewatering and excavation activities to be completed during the Racetrack Pond Fishing Access Site and Habitat Improvement Project construction activities.

INDEX TO TECHNICAL SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

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SECTION 01000
SUMMARY OF WORK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Related Documents
- B. Summary Scope of Work
- C. List of submittals
- D. Measurement and Payment of Bid Items shown on Proposal

1.02 RELATED DOCUMENTS

- A. Sheets and Figures included in Appendix A

SHEET NO.	SHEET TITLE
G1	COVER
G2	GENERAL LEGEND AND NOTES
C1	GENERAL SITE PLAN
C2	DEWATERING PLAN
C3	SUBGRADE PLAN
C4	FINAL GRADING PLAN
C5	GRADING SECTIONS
C6	OUTLET PLAN & PROFILE
C7	ACCESS ROAD PLAN AND PROFILE
C8	PARKING LOT GRADING AND AMENITIES PLAN
C9	TRAIL PLAN AND PROFILE STA 0+00 TO 9+00
C10	TRAIL PLAN AND PROFILE STA 9+00 TO 21+00
C11	TRAIL PLAN AND PROFILE STA 21+00 TO 29+00
C12	TRAIL PLAN AND PROFILE STA 29+00 TO 40+00
C13	TRAIL PLAN AND PROFILE STA 40+00 TO 50+00
C14	TRAIL PLAN AND PROFILE STA 50+00 TO 54+20
C15	SOD SALVAGE PLAN
C16	SOD PLACEMENT AND SEEDING PLAN
C17	BORROW SOURCE AND REPOSITORY OVERVIEW
D1	DEWATERING DETAILS
D2	MISC. DETAILS
D3	LATRINE DETAILS
D4	FISHING PLATFORM DETAILS
D5	BOAT RAMP DETAILS
D6	OUTLET STRUCTURE DETAILS
D7	EROSION CONTROL DETAILS

1.03 SUMMARY SCOPE OF WORK

The scope of work addressed by these plans and specifications consists of dewatering Racetrack Pond, regrading of the pond area, mixing owner-provided compost with onsite vegetated backfill, loading and hauling of Beck Borrow vegetative backfill, mixing of owner-provided compost with Beck Borrow vegetative backfill, placement of compost-amended vegetated backfill (both onsite and Beck Borrow), construction and installation of a pond outlet structure, construction of an outlet channel and construction and installation of Fishing Access Site Amenities (FAS), including access roads, walking trails, boat launch, parking area, fishing access platform and pit latrine (precast pit latrine to be supplied by others but installed as part of the Work). This project will be constructed on state-owned and private property. Racetrack Pond is located adjacent to the Clark Fork River off Interstate 90 at exit 195 along West River Road near Racetrack, Powell County, Montana, Section 16, Township 06 North, Range 9 West.

The Contractor or Contractors shall perform the following work per these specifications:

- A. Dewater Racetrack Pond
- B. Regrade Racetrack Pond to create the habitat improvements
- C. Install the outlet structure
- D. Construct the outlet channel
- E. Place compost-amended vegetative borrow
- F. Construct the FAS amenities

1.04 ADDITIONAL RESPONSIBILITIES

- A. The Contractor is obligated to immediately notify the Engineer and the Montana Natural Resource Damage Program (MT NRDP) in the event of construction problems in order to facilitate practical, functional and cost-effective project modifications. These problems may be associated with differing site conditions, construction staking and measurements, conflicts between plan drawings and specifications, defective materials or other issues.

1.05 List of Submittals

- A. Contractor shall submit all shop drawings, laboratory sample results, product samples, plans, and other submittals required by the Contract to Engineer in accordance with Article 7, Paragraph 7.16, Shop Drawings, Samples and Other Submittals, of the General Conditions. Contractor shall provide material specifications, product cut sheets, and manufacturer's installation instructions to Engineer for all products and

materials installed as a portion of the Work. The list below is provided as an aid to Contractor; this list is not considered to be exhaustive and additional submittals may be requested by Engineer. At a minimum, Contractor shall supply the following submittals:

- Project Schedule
- Copies of all required permits
- Copies of all required bonding and insurance
- Certifications for all supplied geotextiles
- Dewatering Plan
- Notice of Intent for groundwater discharge associated with construction dewatering activities
- Certification for Geotextiles
- Certificates of compliance for ACB mats
- Imported Materials Source/Product Data
- Notice of Intent for Stormwater Discharges Associated with Construction Activities
- Stormwater Pollution Prevention Plan (SWPPP)
- Method of Seedbed Preparation

1.06 MEASUREMENT AND PAYMENT

- A. Work items for which specific unit prices are established will be measured to the nearest unit applicable. Payment for each pay item will be made at the agreed-to unit price for that item. For established lump sum work items, payment will be made at the lump sum price. Such payment will constitute full compensation for all materials, labor, equipment, tools and all other items necessary and incidental to completion of the work.
- B. Compensation for any item of work shown on the Drawings or described in these specifications will be considered incidental to and included in the pay items listed on the bid schedule.

Bid Item 1- Mobilization, Bonding and Insurance

Mobilization shall include all activities and associated costs for transportation of Contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the Contractor's operations at the site; premiums paid for performance and payment bonds, including coinsurance and reinsurance agreements as applicable.

Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal and site clean-up, of offices, buildings and other facilities assembled on the site specifically for this contract.

This work includes mobilization and demobilization required by the contract at the time of award. If additional mobilization and demobilization activities and costs are required during the performance of the contract as a result of changed, deleted, or added items of work for which the

Contractor is entitled to an adjustment in contract price, compensation for such costs will be included in the price adjustment for the item or items of work changed or added.

Work under this Item Include:

- Mobilize and demobilize to and from the project area with all necessary equipment to complete the Work.
- Provide insurance and bonding for the Contract.
- Obtain all required permits, and provide copies to Engineer.
- Prepare and submit all preconstruction submittals to Engineer for approval.
- Provide and remove temporary offices, storage and sanitation facilities.
- Provide site security.
- Dispose of all trash and debris generated by Contractor at a state-licensed solid waste management facility.
- Provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.
- Construct and maintain all access roads as required.
- Traffic Control as required.

Measurement Bid Item 1

No measurement will be made for Bid Item 1.

Payment Bid Item 1

Payment for Bid Item 1 will be based on the lump sum amount as shown on the Bid Proposal Form. Fifty percent (50%) payment for this Bid Item will be allowed once Contractor submits Bond and Insurance Certificates, fully mobilizes to the project area, and obtains approval on all submittals required prior to beginning Work. Full payment for this item will be allowed after Contractor completes the Work for the remainder of the Contract, completes final cleanup work, and fully demobilizes equipment and materials from the project area.

Bid Item 2- Develop and Reclaim Staging Area

Contractor shall construct the equipment and materials staging area at the location shown on the drawings. Contractor shall limit equipment and materials storage to the smallest practical area. Contractor shall use staging areas for staging all construction materials, equipment, contractor's office space, worker parking, fuel storage, vehicle and equipment servicing, and borrow or imported materials stockpiling during construction activities. Contractor shall clear and grub the staging areas as needed and grade the staging areas such that the area slopes gradually toward erosion controls.

Contractor shall store on-site only the equipment and materials to be used for completing the Work. There shall be no disturbance outside the Disturbance Boundary. Contractor is responsible for security of the staging area, hazardous material containment, cleanup of all materials, weed control, site drainage, and erosion control.

Contractor shall remove all equipment, debris and other material from the staging area with the exception of material to remain at the direction of the Engineer. Contractor shall reclaim the

staging area. Reclamation shall include ripping compacted soils, as determined by Engineer, to a depth of 18 inches, ripper spacing not to exceed 12 inches, and regrading ground to match original ground topography.

Measurement Bid Item 2

No measurement will be made for Bid Item 2.

Payment Bid Item 2

Payment for Bid Item 2 will be based on the lump sum amount as shown on the Bid Proposal Form.

Bid Item 3 – Debris Removal, Clearing and Grubbing

Contractor shall remove all surface debris and debris encountered as part of the Work and transport and dispose of all material in a licensed solid waste facility. Contractor shall clear and grub all above-ground and below-ground vegetative materials required to perform the Work. All vegetative material greater than one inch in diameter shall be stacked on-site and placed incorporated into the final grading as directed by Engineer.

Measurement Bid Item 3

No measurement will be made for Bid Item 3.

Payment Bid Item 3

Payment for Bid Item 3 will be based on the lump sum amount as shown on the Bid Proposal Form.

Bid Item 4 – Soil Erosion and Sediment Control

Contractor shall create and file a Notice of Intent (NOI) Form and Storm Water Pollution Prevention Plan (SWPPP) for this project under the current Montana Pollutant Discharge Elimination System (MPDES) with the Montana DEQ Water Quality Division for Storm Water Associated with Construction Activities. All fees associated with this permit application and any subsequent annual fees shall be paid for by Contractor. Contractor shall comply with all requirement of the permit and SWPPP including establishing erosion controls and maintaining all erosion control measures through the warranty period. The Contractor shall submit Notice of Termination (NOT) form when the construction activity is complete and the site has achieved final stabilization.

Measurement Bid Item 4

No measurement will be made for Bid Item 4.

Payment Bid Item 4

Payment for Bid Item 4 will be based on the lump sum amount as shown on the Bid Proposal Form.

Bid Item 5 – Provide Water for Dust Control

Contractor shall provide and operate water truck or trucks with a capacity of at least 4,000 gallons for the control of dust generated during construction activities.

Measurement Bid Item 5

Measurement of Bid Item 5 shall be by the actual number of days during which a water truck is operated.

Payment Bid Item 5

Payment for Bid Item 5 will be based on the unit price bid per day of providing water as shown on the Bid Proposal Form.

Bid Items 6 – 9 General

Contractor shall create and file a Notice of Intent (NOI) under the Construction Dewatering General Permit under the current Montana Pollutant Discharge Elimination System (MPDES) with the Montana DEQ Water Quality Division for discharge of wastewater effluent from dewatering of groundwater and/or surface associated with construction activities. All fees associated with this permit application and any subsequent annual fees shall be paid for by Contractor. Contractor shall comply with all requirements on the permit. The Contractor shall submit Notice of Termination (NOT) form to DEQ and Engineer when the construction activity is complete and dewatering activities are completed.

Bid Item 6 – Dewatering Sediment Ponds

Contractor shall construct and operate dewatering sediment ponds in accordance with the drawings and these specifications.

Measurement Bid Item 6

Measurement of Bid Item 6 shall be by the actual number of sediment ponds constructed as determined by Engineer.

Payment Bid Item 6

Payment for Bid Item 6 will be based on the unit price bid per sediment pond as shown on the Bid Proposal Form.

Bid Item 7 – Dewatering Sump

Contractor shall construct dewatering sumps in accordance with the drawings and these specifications.

Measurement Bid Item 7

Measurement of Bid Item 7 shall be by the actual number of dewatering sumps constructed as determined by Engineer.

Payment Bid Item 7

Payment for Bid Item 7 will be based on the unit price bid per sump as shown on the Bid Proposal Form.

Bid Item 8 – Dewatering Sump Operation

Contractor shall operate dewatering sumps in accordance with the drawings and these specifications.

Measurement Bid Item 8

Measurement of Bid Item 8 shall be by the actual number of units a dewatering sumps is operated and provides a flow rate of at least 1,000 GPM as determined by Engineer.

Payment Bid Item 8

Payment for Bid Item 8 will be based on the unit rate shown on the bid sheet per each 1,000 GPM being pumped per dewatering unit.

Bid Item 9 – Dewatering Trenches

Contractor shall construct dewatering trenches in accordance with the drawings and these specifications.

Measurement Bid Item 9

Measurement of Bid Item 9 shall be by the actual number of linear feet of dewatering trenches constructed as measured by Engineer.

Payment Bid Item 9

Payment for Bid Item 9 will be based on the unit price bid per liner foot as shown on the Bid Proposal Form.

Bid Item 10 – Construct Boat Ramp

Contractor shall construct the boat ramp in accordance with the drawings and these specifications.

Measurement Bid Item 10

Measurement of Bid Item 10 shall be by the actual square yards of boat ramp constructed as measured by Engineer.

Payment Bid Item 10

Payment for Bid Item 10 will be based on the actual square yard amount as shown on the Bid Proposal Form.

Bid Item 11 – Regrade Pond

Contractor shall regrade Racetrack Pond to create the habitat improvements and subgrade for the FAS amenities and topsoil placement as shown on the drawing and in accordance with these specifications.

Measurement Bid Item 11

Measurement of Bid Item 11 shall be by the actual number of cubic yards of material placed as measured by Engineer.

Payment Bid Item 11

Payment for Bid Item 11 will be based on the unit price bid per cubic yard as shown on the Bid Proposal Form.

Bid Item 12 – Provide and Install Pond Outlet Structure

Contractor shall provide and install the pond outlet structure in accordance with the drawings and these specifications.

Measurement Bid Item 12

No measurement will be made for Bid Item 12.

Payment Bid Item 12

Payment for Bid Item 12 will be based on the lump sum amount as shown on the Bid Proposal Form.

Bid Item 13 – Construct Outlet Channel

Contractor shall excavate material and construct the pond outlet channel in accordance with the drawings and these specifications.

Measurement Bid Item 13

Measurement of Bid Item 13 shall be by the actual number of linear feet of outlet channel constructed as measured by Engineer.

Payment Bid Item 13

Payment for Bid Item 13 will be based on the unit price per linear foot as shown on the Bid Proposal Form.

Bid Item 14 – Load, Haul, and Place On-site Vegetative Backfill

Contractor shall load, haul and place on-site vegetative backfill as shown on the drawings and in accordance with these specifications.

Measurement Bid Item 14

Measurement of Bid Item 14 shall be by the actual number of cubic yards of on-site vegetative backfill placed as measured by Engineer.

Payment Bid Item 14

Payment for Bid Item 14 will be based on the unit price per cubic yard as shown on the Bid Proposal Form. Mixing of compost is considered incidental to this bid item and no separate payment shall be made.

Bid Item 15 – Load, Haul, and Place Beck Borrow Vegetative Backfill

Contractor shall load, haul and place Beck Borrow vegetative backfill as shown on the drawings and in accordance with these specifications.

Measurement Bid Item 15

Measurement of Bid Item 15 shall be will be based on bank cubic yards excavated from the Beck Borrow Area as calculated by the engineer based on survey.

Payment Bid Item 15

Payment for Bid Item 15 will be based on the unit price per cubic yard as shown on the Bid Proposal Form. Mixing of compost is considered incidental to this bid item and no separate payment shall be made.

Bid Item 16 – Provide, Place and Compact Road Base for Parking Area and Access Road

Contractor provide, place and compact road base to construct the parking area and access road as shown to the drawings and in accordance with these specifications.

Measurement Bid Item 16

Measurement of Bid Item 16 shall be by the actual number of cubic yards of road base provided, placed and compacted on roads and parking areas as measured by Engineer.

Payment Bid Item 16

Payment for Bid Item 16 will be based on the unit price per cubic yard as shown on the Bid Proposal Form.

Bid Item 17 – Provide and Install Concrete Wheel Stops

Contractor provide and install concrete wheel stops as shown on the drawings and in accordance

with these specifications.

Measurement Bid Item 17

Measurement of Bid Item 17 shall be by the actual number of wheel stops provided and installed as determined by Engineer.

Payment Bid Item 17

Payment for Bid Item 17 will be based on the unit price per concrete wheel stop as shown on the Bid Proposal Form.

Bid Item 18 – Provide and Install Barrier Rocks

Contractor shall provide and install vehicle access barriers as shown on the drawings and in accordance with these specifications.

Measurement Bid Item 18

Measurement of Bid Item 24 shall be by the actual number of barrier rocks provided and installed as determined by Engineer.

Payment Bid Item 18

Payment for Bid Item 18 will be based on the unit price per barrier rock as shown on the Bid Proposal Form.

Bid Item 19 – Provide, Place and Compact Road Base for Trail

Contractor provide, place and compact road base to construct the trail as shown on the drawings and in accordance with these specifications.

Measurement Bid Item 19

Measurement of Bid Item 19 shall be by the actual number of cubic yards of road base provided, placed and compacted on trails as measured by Engineer.

Payment Bid Item 19

Payment for Bid Item 19 will be based on the unit price per cubic yard as shown on the Bid Proposal Form.

Bid Item 20– Install Pre-cast Pit Latrine

Contractor shall prepare the site and install a pre-cast vault latrine (latrine provided by others) and perform backfilling, compaction and leveling as shown on the drawing and in accordance with these specifications.

Measurement Bid Item 20

No measurement will be made for Bid Item 20.

Payment Bid Item 20

Payment for Bid Item 20 will be based on the lump sum amount as shown on the Bid Proposal Form.

Bid Item 21 – Provide and Install ADA Platform Foundation

Contractor shall constructing the foundation units for the fishing access platform. The foundation units consist of cast in place footings.

Measurement Bid Item 21

No measurement will be made for Bid Item 21.

Payment Bid Item 21

Payment for Bid Item 21 will be based on the lump sum amount as shown on the Bid Proposal Form.

Bid Item 22 – Provide and Construct ADA Platform Deck

Contractor shall provide and install the fishing access platform at the project site in accordance with the project drawings and these specifications.

Measurement Bid Item 22

No measurement will be made for Bid Item 22.

Payment Bid Item 22

Payment for Bid Item 22 will be based on the lump sum amount as shown on the Bid Proposal Form.

Bid Item 23 – Hand Broadcast Seeding

Contractor shall prepare a suitable seedbed and hand broadcast seed in areas as shown on the drawings and in accordance with these specifications. Seed to be provided by others.

Measurement Bid Item 23

Measurement of Bid Item 23 shall be by the actual number of acres of seedbed prepared and hand broadcast seeded as measured by Engineer.

Payment Bid Item 23

Payment for Bid Item 23 will be based on the per acres amount as shown on the Bid Proposal Form.

Bid Item 24 – Drill Seeding

Contractor shall prepare a suitable seedbed and drill seed in areas as shown on the drawings and in accordance with these specifications. Seed to be provided by others.

Measurement Bid Item 24

Measurement of Bid Item 24 shall be by the actual number of acres of seedbed prepared and drill seeded as measured by Engineer.

Payment Bid Item 24

Payment for Bid Item 24 will be based on the per acre amount as shown on the Bid Proposal Form.

Bid Item 25 – Wetland Sod Salvage, Storage and Transplant

Contractor shall salvage onsite wetland sod mats, temporarily store salvaged wetland sod mats and transplant wetland sod mats after final grading and Vegetative Backfill placement is complete, as shown on the drawings and in accordance with these specifications.

Measurement Bid Item 25

Measurement of Bid Item 25 shall be by the actual number of square feet of sod salvaged, stored and transplanted as measured by Engineer.

Payment Bid Item 25

Payment for Bid Item 25 will be based on the per square foot amount as shown on the Bid Proposal Form.

END OF SECTION 01000

SECTION 01010
GENERAL PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. PROGRESS SCHEDULES
- B. TEMPORARY FACILITIES AND SITE CONTROL
- C. SURVEYING
- D. ESTIMATED QUANTITIES
- E. SUBMITTALS
- F. TRAFFIC CONTROL AND SITE SAFETY
- G. CONSTRUCTION SEQUENCING AND OTHER CONTRACTORS
- H. STORM WATER MANAGEMENT AND EROSION AND
SEDIMENT CONTROL
- I. EXISTING STRUCTURES
- J. RECORD KEEPING REQUIREMENTS

1.02 PROGRESS SCHEDULES

- A. Contractor shall prepare an initial project schedule and shall update and maintain the schedule appropriately. Copies of all initial schedules and updates shall be provided to the Engineer upon request.

1.03 TEMPORARY FACILITIES AND SITE CONTROL

- A. Contractor shall notify and coordinate with all appropriate utility companies before conducting work proximate to overhead or buried utilities.

1.04 SURVEYING

- A. Contractor shall provide all surveying, measurements and computations needed to complete the work as shown on the Drawings and these specifications.

1.05 ESTIMATED QUANTITIES

- A. All estimated quantities stipulated in the Contract Documents are approximate and are to be used only as a basis for estimating the probable cost of the Work and

for the purpose of comparing the bids submitted for the Work. Actual quantities may differ from estimated quantities.

1.06 SUBMITTALS

- A. Contractor shall provide to Engineer complete product information and shop drawings where required for all materials and equipment proposed for incorporation into the project. Information shall include manufacturer, model or catalog designation, reference standards, complete installation instructions, and shop drawings that show dimensions and location of all parts. Information shall be submitted prior to ordering, and in a timely manner to provide Engineer time for review approval.
- B. In connection with all of the activities described in these Technical Specifications, Contractor shall be responsible and shall notify appropriate representatives of any governmental laws or regulations in addition to those identified in these specifications, including those relating to environmental protection and zoning, that would regulate, prohibit or control the performance by Contractor under these Technical Specifications.

1.07 TRAFFIC CONTROL AND SITE SAFETY

- A. Contractor shall provide all necessary temporary traffic control to complete the Work.
- B. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work.
- C. Contractor shall hold daily safety meetings with workers and to discuss work activities, construction traffic, potential hazards and mitigation.

1.08 STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL

- A. Temporary diversions for storm runoff shall be constructed as specified as needed to direct flows around the work area and as needed to meet the requirements of the SWPP. These diversions shall be designed, implemented and maintained by the Contractor in accordance with Best Management Practices (BMPs) to control erosion and sediment release into the Clark Fork River. BMPs may include, but are not limited to, temporary berms, cofferdams, sediment basin, ditches, straw bales, straw mulch, porous berms, riprap, and erosion control matting.
- B. The Contractor shall plan and execute work to control and minimize surface runoff from cuts, fills, and other disturbed areas. The Contractor shall prevent sediment and/or sediment-laden water from entering the Clark Fork River to the extent practical.

- C. Decontaminate all construction equipment to prevent the spread of noxious weed by cleaning with high-pressure water before mobilizing equipment to or from the Site. Clean all wheels, tracks, undercarriages, fenders, blades, buckets and exterior body prior to entering or exiting the Site. All construction equipment shall be inspected and approved by the Engineer's representative prior to entering the Site.
- D. Dewatering will be required for this project. All dewatering flows collected from open sumps, trenches or excavations shall be routed through sediment retention structure prior to discharge to the Clark Fork River. The Contractor shall comply with the dewatering requirements of Section 02120. All storm runoff flows from work areas also shall be free of sediment prior to discharge.
- E. Best Management Practices (BMP) measures shall be installed along the Clark Fork River prior to any earthwork which could release sediment into the Clark Fork River. BMP shall remain in place until vegetation is established, as approved by Engineer. The methods implemented by the Contractor will be monitored by Engineer to assure compliance with BMPs.
- F. Obtain all required permits for the Work prior to starting construction. All costs necessary to obtain and comply with all applicable permits is incidental to the Work.

1.09 EXISTING STRUCTURES

- A. The Contractor shall notify and coordinate with all appropriate utility companies and with Engineer and the property owners to field-locate overhead or buried utilities, wells, and other existing structures prior to construction. Location, depth, size, and material of existing buried utilities within excavation limits shall be verified prior to beginning construction.
- B. The Contractor shall be responsible for protecting existing structures within and external to the construction area. Any damage to existing structures, whether above or below ground level, shall be repaired to the owner's satisfaction by the Contractor at no additional cost to MT NRDP.

1.10 RECORD KEEPING REQUIREMENTS

- A. Contractor shall maintain on-site, at all times, a complete set of all environmental health and safety documentation, design documents, addenda, and other modifications to the Work. The Contractor will be responsible for furnishing detailed survey notes and other working documents to Engineer if requested.

END OF SECTION

SECTION 01020
MOBILIZATION/DEMobilIZATION

PART 1 GENERAL

1.1 DESCRIPTION

- A. This work consists of moving personnel, equipment, material, and incidentals to the project and performing all work necessary before beginning work at the project site. It also includes the removing of personnel, equipment, material, and incidentals from the project site once the work has been completed as well as the general clean-up of the project site. Mobilization includes the obtaining of insurance and bonds required in the contract.

Work under this Item Includes:

- Mobilize and demobilize to and from the project area with all necessary equipment, materials and personnel to complete the Work.
- Provide insurance and bonding for the Contract.
- Obtain all required permits, and provide copies to Engineer.
- Prepare and submit all preconstruction submittals to Engineer for approval.
- Provide and remove Contractor's temporary offices, storage and sanitation facilities.
- Provide site security.
- Dispose of all trash and debris generated by Contractor at a state-licensed solid waste management facility.
- Provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.
- Construct and maintain all access roads as required.
- Traffic Control as required.

PART 2 PRODUCT — NOT USED

PART 3 EXECUTION — NOT USED

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measure mobilization by the lump sum.

4.2 PAYMENT

- A. Mobilization will be paid as follows:

Payment for this Bid Item will be based on the lump sum amount as shown on the Bid Form. Fifty percent (50%) payment for this Bid Item will be allowed once

Contractor submits Bond and Insurance Certificates, fully mobilizes to the project area, and obtains approval on all submittals required prior to beginning Work. Full payment for this item will be allowed after Contractor completes the Work for the remainder of the Contract, completes final cleanup work, and fully demobilizes equipment and materials from the project area.

END OF SECTION 01020

SECTION 01030
PROVIDE WATER FOR DUST CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Providing and operating water truck or water trucks for the control of dust generated during construction at the Racetrack Pond Site.

PART 2 PRODUCTS

- A. Water. Water for Dust Control may be obtained from Racetrack Pond. Provide any pumps, risers or other equipment necessary to load water onto water trucks.

- B. Trucks. Provide a Water Truck with a capacity of at least 4,000 gallons and fitted with nozzles, booms or other apparatus to provide uniform application of water.

PART 3 EXECUTION

3.1 DUST CONTROL

- A. Operate water truck or trucks to place water on haul roads, excavation areas or other areas bare of vegetation to eliminate all visible dust or as otherwise requested by the Engineer.

- B. If necessary and as requested by the engineer, wash entryways to remove mud from vehicles leaving the site.

4.0 Measurement and Payment

4.1 Measurement

- A. Measurement for this item shall be by the number of days during which a water truck is operated and spreads water for dust control or other purposes. If water is spread for dust control during a two-hour period (either two consecutive hours or two non-consecutive one hour periods within the work day) or more, it will be considered one day. If, in the Engineer's opinion, water trucks are operated during periods when dust is not visible or when roads are excessively wet or muddy, the periods of time when this occurs shall not be measured or paid.

4.2 Payment

- A. Payment for this item shall be made at the unit price bid per day of operation.

END OF SECTION

SECTION 02000
DEBRIS REMOVAL, CLEARING AND GRUBBING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Removal of surface debris and debris encountered as part of the Work.
- B. Clearing and grubbing of all vegetation including trees, shrubs, and grass required to perform the Work.
- C. Stacking of woody debris on site.
- D. Haul of debris to a licensed landfill.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

3.1 PROTECTION

- A. Locate, identify, and protect existing utilities from damage.
- B. Protect benchmarks, existing structures, and monitoring wells, domestic wells from damage or displacement.
- C. Protect existing vegetation identified to be preserved by the Engineer.

3.2 CLEARING AND GRUBBING

- A. Clear all trees, shrubs and vegetation, including the root zone, from all areas impacted by the Work and as required for access to site and execution of Work as shown on the Drawings.
- B. Stack all tree and shrub debris including roots and rootwads at a site designated by the Engineer.
- C. Grub all roots and rootwads from trees and brush within the areas impacted by the Work.
- D. Install all necessary erosion control measures before starting any clearing and grubbing activities in accordance with the Contract Documents and the SWPP. Maintain the erosion control measures throughout the Work.

3.3 REMOVAL

- A. Haul debris, rock, and removed vegetation not otherwise designated for stacking on site to a licensed landfill for disposal. Obtain weight tickets for each load and provide to Engineer. Disposal costs are incidental to this bid item and no separate payment shall be made.

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measure debris removal, clearing and grubbing by the lump sum.

4.2 PAYMENT

- A. Payment for this debris removal, clearing and grubbing will be based on the lump sum amount as shown on the Bid Form.

END OF SECTION

SECTION 02110
GEOTEXTILES

PART 1: GENERAL

1.1 DESCRIPTION

- A. This work consists of furnishing, and placing a geotextile as a subsurface drainage fabric permeable separator between dissimilar materials (such as between subgrade and sub base/base), stabilization fabric, temporary and/or permanent erosion control measures or as waterproofing/stress releasing membrane within pavement structures.

1.2 REFERENCES

- A. The current publications listed below form part of this specification.

B. ASTM Standards

D123	Standard Terminology Relating to Textiles
D276	Test Methods for Identification of Fibers in Textiles
D4354	Practice for Sampling of Geosynthetics for Testing
D4632	Breaking; Load and Elongation Of Geotextiles (Grab Method)
D4533	Trapezoid Tearing, Strength of Geotextiles
D3786	Hydraulic Bursting, Strength of Knitted Goods and Nonwoven Fabrics Diaphragm Bursting Strength Tester Methods
D4833	Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
D4491	Water Permeability of Geotextiles by Permittivity
D4751	Determining Apparent Opening Size of a Geotextile
D4354	Sampling of Geotextiles for Testing
D4759	Determining, the Specification Conformance of Geosynthetics
D276	Identification of Fibers in Textiles
D4355	Deterioration of Geotextiles from exposure to ultraviolet light & water (Xenon-arc type apparatus)
D4873	Guide for Identification, Storage and Handling of Geotextiles
D5141	Test Method for Determining Filter Efficiency and Flow rate for Silt Fence Application of a Geotextile Using Site Specific Soils
D5261	Test Methods for Measuring Mass per Unit Area of Geotextiles
D422 & D1140	Particle Size Analysis of Soils
D4318	Determining the Plastic Limit and Plasticity Index of Soils

D698 The Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) drop

C. ASSHTO Specifications – M288 Geotextile Specifications for Highway Applications

1. Augmenting and prevailing over this specification section.

PART 2: PRODUCTS

2.1 PHYSICAL AND CHEMICAL REQUIREMENTS

- A. Assure that fibers used in the manufacture of geotextiles, and the threads used in joining geotextiles by sewing, consist of long-chain synthetic polymers, composed of at least 95% by weight polyolefins or polyesters. They must be formed into a network so the filaments on yarns retain dimensional stability relative to each other, including selvages. Furnish materials meeting the physical requirements for the indicated application as described by the corresponding table(s) of properties in ASSHTO M288, Geotextile Specifications for Highway Applications.

2.2 CERTIFICATION

- A. Assure the manufacturer furnishes the purchaser a certificate stating: the name of the manufacturer, the chemical composition of the filaments or yarns, and other information fully describing the geotextile. The manufacturer must include in the certificate a guarantee stating that the geotextile furnished meets specifications. The certificate must be attested to by a person having a legal authority to bind the company. Mismatching, or misrepresentation by the manufacturer is reason to reject the geotextile under these specifications. Notice sent to the manufacturer by the purchaser regarding rejection of, will be considered to be notice to all wholesalers, jobbers, distributors, agents and other intermediaries handling the manufacturer's product.
- B. Label the fabric and its container with the manufacturer's name and fabric type or trade name, lot number and quantity.

2.3 SHIPMENT AND STORAGE

- A. During shipment and storage, protect the fabric from direct sunlight, ultra-violet rays, temperatures exceeding 160⁰F (71°C), mud, dust and debris. Keep the fabrics in the manufacturer's wrapping until just before use. Include with each shipping, a document, a certification showing that the geotextile meets the

manufacturer's certificate and a guarantee that has been previously filed with the purchaser.

PART 3: EXECUTION

3.1 GENERAL

- A. Where placing geotextiles on native ground, cut the trees and shrubs flush with the ground surface. Do not remove the topsoil and vegetation mat. Remove all sharp objects and large rocks. Fill depressions or holes with a suitable material to provide a firm foundation.
- B. Replace or repair all geotextile that is torn, punctured, or muddy. Remove the damaged area and place a patch of the same type of geotextile overlapping 3 feet, in all directions, (0.9m) beyond the damaged area.

3.2 DRAINAGE, SEPARATION AND STABILIZATION APPLICATIONS

- A. Shape the subgrade to a smooth surface and to the cross section required. Shape slopes to gradually transition into slope adjustments without noticeable breaks. At the ends of cuts, the intersection of cuts, and embankments, adjust slopes in the horizontal and vertical planes to blend into each other or into the natural ground.
- B. Remove all material larger than 6 inches (15 cm) within the top 6 inches (15 cm) of the roadbed. Remove unsuitable material from the roadbed and replace with suitable material. Finish the roadbed and ditches to the required elevation and cross-section.
- C. Place the geotextile smooth and free of tension, stress, or wrinkles. Fold and cut the geotextile to conform to curves. Overlap in the direction of construction. Overlap the geotextile a minimum of 2 feet (0.6m) at the ends and sides of adjoining sheets or sew the geotextile joints according to the manufacturer's recommendations. Do not place longitudinal overlaps below anticipated wheel loads. Hold the geotextile in place with pins, staples, or piles of cover material.
- D. End dump the cover material onto the geotextile from the edge of the geotextile or from previously placed cover material. Do not operate equipment directly on the geotextile. Spread the end-dumped pile of cover material maintaining a minimum lift thickness of 10 inches (250mm). Compact the cover material with rubber-tired or nonvibratory smooth drum rollers. Avoid sudden stops, starts, or turns of the construction equipment. Fill all ruts from construction equipment with additional cover material. Do not regrade ruts with placement equipment.

- E. Place subsequent lifts of cover material in the same manner as the initial lift. Vibratory compactors may be used for compacting subsequent lifts. If foundation failures occur, repair the damaged areas and revert to the use of nonvibratory compaction equipment.

3.3 TEMPORARY AND PERMANENT EROSION CONTROL APPLICATIONS

- A. Place and anchor the geotextile on the approved smooth-graded surface. For slope protection, place the long dimension of the geotextile down the slope. For stream bank protection, place the long dimension of the geotextile parallel to the centerline of the channel.
- B. Overlap the geotextile a minimum of 12 inches (300mm) at the ends and sides of adjoining sheets or sew the geotextile joints according to the manufacturer's recommendations. Overlap the uphill or upstream sheet over the downhill or downstream sheet. Offset end joints of adjacent sheets a minimum of 5 feet (1.5m). Pins may be used to hold the geotextile sheets in place. Space pins along the overlaps at approximately 3 foot (1m) centers.
- C. Place aggregate, slope protection, or riprap on the geotextile starting at the toe of the slope and proceed upward. Place riprap onto the geotextile from a height of less than 12 inches (300 mm). Place slope protection rock or aggregate backfill onto the geotextile from a height less than 3 feet (0.9m). In underwater applications, place the geotextile and cover material in the same day.

3.4 PAVEMENT APPLICATIONS

- A. Use SS-1 crack filler meeting the applicable section for crack filler for surface preparation of cracks between 1/8-and 1/4-inch wide. Fill cracks exceeding 1/4-inch (6 mm) width with an asphalt emulsion slurry consisting of 20 percent by volume of SS-1, 2 percent by volume Portland cement and the remaining portion fine sand.
- B. Use distributors for spraying a Performance Graded (PG) Asphaltic Binder meeting the specifications for the asphalt cement being used in the asphalt concrete overlay.
- C. Place fabric using manufacturer recommended equipment.
- D. Handle and place all fabric following the manufacturer's recommendations.
- E. Clean pavement to receive fabric of dirt, water and vegetation. Clean all cracks between 1/8-inch (3 mm) and 1/4-inch (6 mm) wide and fill flush to the surface with SS-1 bituminous material. Top with sand. Repair larger cracks or holes

using the asphalt emulsion slurry. Pour the mixture into the cracks until full. Re-fill with slurry, the following day, any cracks which are not completely filled initially. When a leveling course is required, place it before installing the fabric. Areas to be covered with a leveling course do not require surface preparations for cracks unless the leveling courses will be less than 0.3 foot (10cm).

- F. Uniformly apply the asphaltic binder at the rate determined by the Engineer. The quantity will vary with pavement porosity. Take care to place sufficient binder to satisfy the fabric and make the membrane impervious to water without causing a slippage plane. The applications rates are typically 0.25 to 0.30 gallon per square yard. Apply binder using a distributor.
- G. Heat the asphalt binder high enough to permit a uniform spray pattern. Ensure air temperature is at least 50⁰ F and rising before applying binder and fabric.
- H. Place the paving geotextile onto the asphalt sealant with minimal wrinkling. Slit, lay flat and tack all wrinkles or folds higher than 1inch (25 mm). Broom and/or roll the paving geotextile to maximize fabric contact with the pavement surface.
- I. At geotextile joints, overlap the geotextile 1 to 3 inches (25 to 75 mm) to ensure full closure. Overlap transverse joints in the direction of paving to prevent edge pickup by the paver. Apply additional asphalt sealant to paving geotextile overlaps to ensure proper bonding of the double fabric layer.
- J. If asphalt sealant bleeds through the fabric, treat the affected areas with blotter. Minimize traffic on the geotextile. If circumstances require traffic on the fabric, apply blotter and place "slippery when wet" signs.
- K. Broom the excess blotter from the geotextile surfaces before placing the overlay. Repair all damaged fabric before placing overlay. Apply a light tack coat before placing the overlay. To avoid damaging the geotextile, do not turn equipment on the geotextile.
- L. Place a hot asphalt concrete overlay within 48 hours after placing the paving geotextile. Limit the lay-down temperature of the mix to a maximum of 325⁰F (163⁰C) except when the paving geotextile is composed of polypropylene fibers, limit the lay-down temperature of the mix to a maximum of 300⁰F (149⁰C).

PART 4: MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. Measurement and Payment for geotextiles will be considered incidental to Bid Item 10 – Construction Boat Ramp.

4.2 PAVING FABRICS

- A. Fabric is measured and paid per square yard of roadway surface covered, complete and in place. No allowance is made for additional fabric required for overlap joints. No allowance is made for blotter sand (if occasionally required).
- B. Crack filling is measured per job and payment is at contract lump sum price, complete in place.
- C. Asphalt cement binder is measured and paid by the ton, corrected to standard temperature, complete in place.

END OF SECTION

SECTION 02111
ARTICULATED CONCRETE BLOCK

PART 1: GENERAL

1.1 DESCRIPTION

- A. This work consists of minor excavation and grading to form a foundation for a boat ramp, furnishing, and placing a separation geotextile, furnishing and placing Articulated Concrete Block (ACB) mats as a boat ramp, and placing gravel in the ACB mats.

1.2 REFERENCES

- A. The current publications listed below form part of this specification.

B. ASTM Standards

D422 & D1140	Particle Size Analysis of Soils
D4318	Determining the Plastic Limit and Plasticity Index of Soils
D698	The Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) drop
D6884	Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems

C. Submittals

The Contractor shall furnish manufacturer's certificates of compliance for ACB mats, revetment cable, geotextile, and any revetment cable fittings and connectors. The Contractor shall also furnish the manufacturer's specifications, literature, preliminary shop drawings for the layout of the mats, installation and safety instructions, and any recommendations, if applicable, that are specifically related to the project. If a color has been specified for the block, the Contractor shall submit a color chart indicating the specified standard color.

Alternative materials from qualified suppliers may be considered; to qualify, proposed alternative suppliers must provide a product(s) specification submittal package to the Engineer. Submittal packages must include, as a minimum, the following:

1. A list of 5 comparable projects, in terms of size and applications, in the United States, where the satisfactory performance of the specific alternate ACB system can be verified after a minimum of five (5) years of service life;
2. Information about, or certifications of, all materials associated with the ACB system as detailed above, including (but not limited to) cable, fittings, geotextile, and any other

materials required for satisfactory installation in accordance with *ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems*.

3. The names and contact information (phone numbers and e-mail addresses, at a minimum) for the suppliers' representatives, for technical, production or logistics questions, at least one of whom must reside in the state where the project is located.

PART 2: PRODUCTS

2.1 ACB Mats

All ACB mats shall be prefabricated as an assembly of concrete blocks, and laced with revetment cables. The ACB system may also be assembled on-site by hand-placing the individual units with subsequent insertion of cables.

Individual units in the system shall be staggered and interlocked for enhanced stability. The mats shall be constructed of open and/or closed cell units as shown on the contract drawings. The open cell units must have two (2) vertical openings of rectangular cross section with sufficient wall thickness to resist cracking during shipping and installation. The open cell units must have an open area of 18-23% as measured from the base of the mat. Parallel strands of cable shall extend through a minimum of two (2) cable ducts in each block allowing for longitudinal binding of the units within a mat. Each row of units shall be laterally offset by one-half of a block width from the adjacent row so that any given block is cabled to four other blocks (two in the row above and two in the row below).

Each block shall incorporate interlocking surfaces that minimize lateral displacement of the blocks within the mats when they are lifted by the longitudinal revetment cables. The interlocking surfaces must not protrude beyond the perimeter of the blocks to such an extent that they reduce the flexibility or articulation capability of the ACB mats or become damaged or broken when the mats are lifted during shipment or placement. Once the mats are in place, the interlocking surfaces shall minimize the lateral displacement of the blocks even if the cables should become damaged or removed. The mats must be able to flex a minimum of 18° between any given row or column of blocks in the uplift direction and 45° in the downward direction.

The cables inserted into the mats shall form lifting loops at one end of the mat with the corresponding cable ends spliced together to form a lifting loop at the other end of the mat. The ENGINEER shall approve appropriate sleeves for use in order to splice the lifting loop. The cables shall be inserted after sufficient time has been allowed for the concrete to complete the curing process.

The ACB mats shall be placed on a geotextile as specified herein or shown on the drawings. Under no circumstances shall the filter fabric be permanently affixed or otherwise adhered to the blocks or mats; i.e., the geotextile shall be independent of the block system.

2.2 Geotextile

- A. Geotextile shall be Tencate Mirafi 180N or an approved equivalent and as otherwise described in Section 02110.

2.3 Gravel Infill

- A. Gravel infill for filling the voids in the blocks shall consist of an on-site stockpiled Type I material provided by Owner.

PART 3: EXECUTION

3.1 Subgrade Preparation

All subgrade preparation shall be performed in accordance with *ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems*, as updated and amended.

The slope shall be graded to a smooth plane surface to ensure that intimate contact is achieved between the slope face and the geotextile (filter fabric), and between the geotextile and the entire bottom surface of the individual ACBs. All slope deformities, roots, grade stakes, and stones that project normal to the local slope face must be re-graded or removed. No holes, "pockmarks", slope board teeth marks, footprints, or other voids greater than 0.5 inch in depth normal to the local slope face shall be permitted. No grooves or depressions greater than 0.5 inches in depth normal to the local slope face with a dimension exceeding 1.0 foot in any direction shall be permitted. Where such areas are evident, they shall be brought to grade by placing compacted homogeneous material.

If subgrade is constructed on fill material, place fill material in lifts not to exceed six inches in finished depth and compact to 95% of maximum dry density per ASTM D-698.

Excavation and preparation for all termination trenches or aprons shall be done in accordance to the lines, grades and dimensions shown in the Contract Drawings. The termination trench hinge-point at the top of the slope shall be uniformly graded so that no dips or bumps greater than 0.5 inches over or under the local grade occur. The width of the termination trench hinge-point shall also be graded uniformly to assure intimate contact between all ACBs and the underlying grade at the hinge-point.

Immediately prior to placing the filter fabric and ACB mats, the prepared subgrade shall be inspected by the Engineer. No geotextile fabric or blocks shall be placed thereon until that area has been approved by the Engineer.

3.2 Placement of Geotextile Fabric

All placement and preparation should be performed in accordance with *ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment*

Systems, as updated and amended.

The geotextile will be placed directly on the prepared area, in intimate contact with the subgrade, and free of folds or wrinkles. The geotextile will not be walked on or disturbed when the result is a loss of intimate contact between the ACB and the geotextile or between the geotextile and the subgrade. The geotextile filter fabric will be placed so that the upstream strip of fabric overlaps the downstream strip. The longitudinal and transverse joints will be overlapped at least one and a half (1.5) feet for dry installations and at least three (3) feet for below-water installations. The geotextile will extend at least one (1) foot beyond the top and bottom revetment termination points, or as required by the Engineer. If ACBs are assembled and placed as large mattresses, the top lap edge of the geotextile should not occur in the same location as a space between ACB mats unless the space is concrete filled.

3.3 Placement of ACBs/Mats

ACB placement and preparation should be performed in accordance with *ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems*, as amended and updated.

ACB block/mats will be constructed within the specified lines and grades shown on the Contract Drawings.

The subgrade shall be prepared in such a manner as to produce a smooth plane surface prior to placement of the ACBs or mats. No individual block within the plane of placed ACBs will protrude more than one-half inch or as otherwise specified by the Engineer. ACBs should be flush and develop intimate contact with the underlying geotextile and subgrade. Proposed hand placing is only to be used in limited areas, specifically identified by the Engineer or the approved manufacturers' mat layout drawings.

If assembled and placed as large mattresses, the ACB mats will be attached to a spreader bar or other approved device to aid in the lifting and placing of the mats in their proper position by the use of a crane or other approved equipment. The equipment used should have adequate capacity to place the mats without bumping, dragging, tearing or otherwise damaging the underlying fabric. The mats will be placed side-by-side, so that the mats abut each other, and/or end-to-end. Mat seams or openings between mats greater than two (2) inches will be backfilled with 4000 p.s.i. non-shrink grout, concrete or other material approved by the Engineer. Whether placed by hand or in large mattresses, distinct changes in grade that results in a discontinuous revetment surface in the direction of flow will require backfill at the grade change location so as to produce a continuous surface.

Termination trenches will be backfilled and compacted flush with the top of the blocks. The integrity of the trench backfill must be maintained so as to ensure a surface that is flush with the top surface of the ACBs for its entire service life. Termination trenches will be backfilled as shown on the Drawings. Backfilling and compaction of trenches will be completed in a timely fashion. No more than 500 linear feet of placed ACBs with non-

completed termination trenches will be permitted at any time.

The cells or openings in the ACBs must be backfilled and compacted with material, as specified on the drawings or elsewhere in this Specification. Compaction shall consist of tamping by hand with a bar or shovel. Backfilling and compaction will be completed in a timely manner so that no more than 500 feet of exposed mats exist at any time.

PART 4: MEASUREMENT AND PAYMENT

4.1 Measurement

- A. ACBs will be measured by the square yard and shall include the area of all blocks including those buried in termination trenches or aprons. Area shall be calculated by the Engineer as the product of length and width of individual mats or an equivalent computation for other than rectangular installations.
- B. No separate measurement or payment will be made for geotextile, excavation, grading, backfill, compaction or placement of infill gravel used in ACB installation. These items will be considered incidental to ACB installation

4.2 Payment

- A. Payment shall be made at the unit rate per square yard shown on the Bid Form, Bid Item 10 – Construct Boat Ramp and shall be considered full payment for all labor, equipment, materials and incidentals for this work.

END OF SECTION

SECTION 02120
CONSTRUCTION DEWATERING

PART 1 GENERAL

1.1 SUMMARY

A. DEWATERING ASSOCIATED WITH CONSTRUCTION ACTIVITIES

1. The Contractor is responsible for creating and filling a Notice of Intent (NOI) for this project under the current Montana Pollutant Discharge Elimination System (MPDES) with the Water Quality Division of Montana Dept. of Environmental Quality (MDEQ) for discharge of wastewater effluent from dewatering of groundwater and/or surface water associated with construction activities. All fees associated with this permit application and any subsequent annual fees will be paid for by Contractor.
2. The Contractor shall be required to comply with all requirements of the 2015 (or current) "Construction Dewatering General Permit" (General Permit). The Contractor shall create a Dewatering Control Plan (Dewatering Plan) prior to initiating dewatering activities. The Contractor is responsible for installing, maintaining and preserving all Best Management Practices (BMPs) in accordance with the Dewatering Plan. The Contractor shall be responsible for performing all Monitoring, Reporting, and Records Retention Requirements in the General Permit. The Contractor shall be responsible to make any necessary changes to the Dewatering Plan including Corrective Actions to prevent water with elevated turbidity or an oily sheen from being discharged.
3. The Contractor must have a copy of the NOI Receipt Confirmation Letter from DEQ providing coverage to discharge groundwater water under the General Permit and copies of the Contractor's reporting documentation on site at all times during construction. The Contractor is solely responsible for any and all damages and/or fines that may result from discharge from this site during the duration of this contract. The Contractor shall provide all monitoring and reporting records to the Engineer. The Contractor shall submit all monitoring reports within 2 days after completion of the report. Additionally, Contractor shall keep a copy of their updated Dewatering Plan on site at all times.
4. The Contractor is responsible to submit Notice of Termination (NOT) form to DEQ and Engineer when the construction dewatering activities are complete.

- B.** Contractor shall be responsible for all permits fees, including any fees associated with re-application or renewal.

1.2 SECTION INCLUDES

This Section includes a description of site conditions and specifies dewatering requirements and procedures necessary during installation and use of the following:

- A. Dewatering Pumps and Appurtenances
- B. Ground-Water Collection Trenches and Sumps
- C. Sediment Detention Ponds

1.3 RELATED SECTIONS

- A. Section 02220 - Excavating

1.4 SUBMITTALS

- A. The Contractor shall submit a Dewatering Plan to the Engineer prior to executing the work for review and approval by the Engineer and the Owner and in accordance with the Construction Dewatering General Permit. The Construction Dewatering Plan shall be a written procedure for implementing the construction dewatering requirements specified herein. The plan shall describe the layout, materials, and equipment, and the operation and maintenance procedures proposed. The Construction Dewatering Plan shall meet any criteria set forth in the Army Corp of Engineers 404 Federal Clean Water Act general permit, MDEQ 318 permit, MDEQ General Permit for Storm Water Discharges, Montana FWP 124 permit and any other applicable permits.

1.5 DESCRIPTION OF SITE CONDITIONS

- A. The Site condition description provided herein is based on surface observations and groundwater calculations conducted by the Engineer. No Subsurface exploration was conducted.
 - 1. General: Racetrack Pond must be dewatered by the Contractor to implement the regrading of the pond. The Pond contains a large amount of surface water (approximately 420 acre-feet) which must be evacuated and it is believed that groundwater and infiltration from nearby irrigation ditches and from infiltration from the Clark Fork River as well as infiltration from rainfall and snowmelt on upland areas contributes to the pond.
 - 2. Initial dewatering of the pond as well as secondary dewatering consisting of sumps, trenching and significant pumping will be required. Dewatering pumping rates up to and exceeding 7,000 GPM will be required for initial dewatering and pump rates up to 3,500 GPM will be required to maintain dewatering after initial drawdown. Rapid dewatering of the surface water as well as maintaining adequate dewatering during regrading activities is essential to the successful

- completion of the project.
3. Water from dewatering operations shall not be allowed to be discharged to the Clark Fork River unless free of turbidity, as required by the General Permit. No turbid discharge to the river is allowed. If turbid water is expected, the Contractor shall discharge first to settling ponds before release to the Clark Fork River. Discharge of dewatering water shall not cause erosion or alteration to the banks or streambed of the Clark Fork River.
 4. Dewatering shall be conducted in stages. Initial drawdown shall be performed to remove all surface water to the current bottom of the pond elevation. After initial drawdown, trenches and sumps shall be installed to further draw down groundwater in order to perform the Work.

PART 2 PRODUCTS

2.1 EQUIPMENT AND MATERIALS

- A. The Contractor shall provide, and maintain on site, all equipment, piping, fittings, and appurtenances necessary to collect, pump, and convey discharge water to adequately dewater all open excavations and to allow for regrading activities. This shall include keeping spare fittings, pumps and other materials necessary to maintain a continuously operating dewatering system. Dewatering system shall be able to provide a pump rate of 500 GPM to 7,000 GPM or greater.
- B. Contractor shall provide and maintain primary and backup power supplies and power distribution systems as necessary to operate the dewatering system without significant interruption. All grounding shall be provided per the National Electrical Code. The power plants and their appurtenances shall be protected from weather and other potentially detrimental conditions at the site (e.g., dust, weather, etc.).
- C. The Contractor shall provide all necessary equipment and materials to collect and pump dewatering flows.

PART 3 EXECUTION

3.1 DEWATERING

- A. The Contractor shall fully implement all measures and precautions necessary to ensure the safety of workers, and the protection of the Work (including maintenance of integrity against rupture and/or heave of the bottom of the excavation) during excavation and dewatering, including, but not limited to, full implementation of the requirements of this Section of the Specifications.
- B. Contractor shall provide backup and spare equipment (as specified in Part 2.1), immediately available for installation and/or operation to minimize any interruption in the required pumping. In the event of pump failure for reasons beyond the Contractor's ability to control, all excavation below the water table or

in locations that otherwise require active dewatering shall cease; Engineer shall be immediately notified; and Contractor shall implement repairs and resume pumping as soon as possible.

- C. Maintain excavation dewatering sufficiently to allow for visual inspection, quality assurance, and as-built surveying, to be conducted by Engineer at their discretion.
- D. Contractor shall implement the sediment sumps, trenches, sump operations (pumps) and sediment detention ponds shown on the drawings. On completion of dewatering, Contractor shall backfill or regrade all excavations for dewatering so as to match the surrounding finished ground.

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement for Groundwater Dewatering Sumps, will be by the actual number of sumps constructed.
- B. Measurement for Dewatering Sump Operation, will be by the actual number of units each sump is operated and provides a flow rate of 500 GPM. If two sumps are operated each at 500 GPM or if one sump provides a flow rate of at least 1,000 GPM then two units will be measured and paid. If three sumps are operated each at 500 GPM or if one sump provides a flow rate of at least 1,500 GPM then three units will be measured and paid. For the purpose of this Bid Item, a unit shall be equivalent to one 24-hour period. No partial payments will be made for units when pump operation is intermittent. If the Contractor chooses to dewater with a pump or pumps using an intake structure that is different than a sump (such as a floating intake), then for purposes of this bid item only, this shall be considered sump operation and will be paid as described above. Engineer may require documentation of pump capacity such as pump rating curves or flow meters to demonstrate pumping capacities. It will be the responsibility of the Contractor to maintain documentation of pumping capacities. Pumping capacities will be verified by Engineer.
- C. Measurement for Groundwater Dewatering Trenches, will be by the actual number of linear feet (to the nearest linear foot) of dewatering trench constructed as measured along the centerline of the trench where the trench is to full depth. No measurement shall be made for additional length for sloping of the trench wall at either end of the full depth trench.
- D. Measurement for Groundwater Dewatering Sediment Ponds, shall be by the actual number of sediment ponds constructed as determined by Engineer.

4.2 PAYMENT

- A. Payment for Dewatering Sumps shall be made at the unit rate shown on the bid sheet per sump constructed.
- B. Payment for Dewatering Sump Operation shall be made at the unit rate per each 500 GPM pump rate per day as shown on the bid sheet.
- C. Payment for Groundwater Dewatering Trenches shall be made at the unit rate shown on the bid sheet per foot of trench constructed.
- D. Payment for Groundwater Dewatering Ponds shall be made at the unit price shown on the bid sheet per sediment pond constructed.

END OF SECTION

SECTION 02200
EXCAVATING

PART 1 GENERAL

1.1 DESCRIPTION

- A. Work Included: Work under this section includes excavating the new outlet channel and excavation and regrading of existing soils in the existing pond (including Bid Item 10 – Construct Boat Ramp, Bid Item 11 – Regrade Pond, Bid Item 13 – Construct Outlet Channel, Bid Item 14 – Load, Haul, and Place On-site Vegetative Backfill, Bid Item 15 – Load, Haul, and Place Beck Borrow Vegetative Backfill, and Bid Item 20 Install Pre-cast Pit Latrine) as shown on the Drawings.

1.2 RELATED SECTIONS

Section 02000 – DEBRIS REMOVAL, CLEARING AND GRUBBING
Section 02120 - DEWATERING
Section 02280 – STREAM CHANNELS AND
DIVERSIONS

1.3 REGULATORY REQUIREMENTS

- A. Sheet piling, Shoring, and Bracing: Except where trench banks are cut back on a stable slope, provide and maintain all sheet piling, shoring, and bracing necessary to protect workers, and to protect adjoining grades and structures from caving, sliding, erosion or other damage in accordance with Occupational Safety and Health Standards 29 CFR Part 1926 - Construction Standards for Excavations; the Site Specific Health and Safety Plan; and other applicable codes and governing authorities.

1.4 FIELD MEASUREMENTS

- A. Verify that survey benchmarks and intended reference elevations for the Work indicated on the Drawings are accurate as indicated. Notify Engineer of any discrepancies.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

3.1 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Accurately locate, identify, and protect from damage all utilities, benchmarks and wells not designated for demolition. Contractor must verify that all utilities and water lines through the work area have been accurately located prior to commencing excavation activities.

- C. Abandonment, demolition or preservation of designated monitoring wells shall be undertaken prior to construction or excavation in the areas adjacent to the wells.
- D. Protect adjacent structures from damage by excavation work.
- E. Contractor shall maintain the minimum utility offset, as required by the utility owner, between the utility and the excavation surface.

3.2 EXCAVATION

- A. Grade top perimeter of excavation and other work areas to prevent surface runoff from draining into the excavation. Excavated areas shall be graded to promote surface drainage and discourage ponding prior to closure.
- B. The use of explosive materials will not be permitted.
- C. Excavation shall conform to the boundaries, elevations and excavation slopes shown on the Drawings.
- D. Remove loose material, lumped subsoil, boulders, and loose rock from excavations leaving excavation surface exposed and clean.
- E. During all excavation activities, maintain and protect monitoring wells designated to be preserved if applicable (see Drawings).

3.3 TOLERANCES

- A. Excavate to within ± 0.3 feet of elevation and location as shown by the Drawings.
- B. Maintain excavation dewatering sufficiently to allow for visual inspection and as-built surveying, and to maintain stable side slopes.
- C. Excavate channels to within ± 0.3 feet of elevation and location and within $\pm 0.1\%$ of grade as shown on the Drawings.

3.4 FIELD QUALITY CONTROL

- A. Provide for access, visual inspection and construction surveying of excavation surfaces as required by the Engineer.

3.5 PROTECTION

- A. Protect excavations as required to prevent cave-in or loose soil from falling into excavation.

END OF SECTION

SECTION 02210

FILL MATERIALS AND PLACEMENT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

This section specifies fill materials, borrow areas/sources of fill materials, and fill placement requirements for the following:

- A. General Fill
- B. On Site Vegetative Backfill
- C. Beck Borrow Vegetative Backfill
- D. Compost

1.2 RELATED SECTIONS

Section 02200 Excavation

Section 02280 - Stream Channels and Diversions

1.3 REFERENCES

- A. Sampling and Preparation
 - 1. ASTM D75 - Standard Practice for Sampling Aggregates.
 - 2. ASTM D420 - Recommended Practice for Investigating and Sampling Soil and Rock.
- B. Classification
 - 1. ASTM D421 - Standard Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants.
 - 2. ASTM D422 - Standard Method for Particle-Size Analysis of Soils.
 - 3. ASTM D2487 - Classification of Soils for Engineering Purposes.
 - 4. ASTM D2488 - Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).
 - 5. ASTM D4318 - Standard Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils.

C. Density and Moisture Content: Field

1. ASTM D1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.
2. ASTM D2922 - Test Methods for Density of Soil and Soil- Aggregate in Place by Nuclear Methods (Shallow Depth).
3. ASTM D3017 - Test Methods for Moisture Content of Soil and Soil-Aggregate Mixtures.

D. Density and Moisture Content: Laboratory

1. ASTM D698 or AASHTO T99 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
2. ASTM D1557 or AASHTO T180 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb (4.54 Kg) Rammer and 18 inch (457 mm) Drop.
3. ASTM D2216 - Laboratory Determination of Water (Moisture) Content of Soil, Rock and Soil Aggregate Mixtures.
4. ASTM D4254 - Minimum Index Density of Soils and Calculation of Relative Density.
5. ASTM D4643 - Determination of Water (Moisture) Content of Soil, Microwave Oven Method.
6. ASTM D4718 - Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

- A. General Fill: General Fill shall consist of material excavated from within the and around the pond and from within the constructed new channel corridor in those areas where material must be removed to reach final grade or subgrade. General fill shall be free of vegetative material, large rock (> 1') and other deleterious material.
- B. On Site Vegetative Backfill: On Site Vegetative Backfill shall consist of material stockpiled on site at the location shown on the drawings.

- C. Beck Borrow Vegetative Backfill shall consist of material excavated by Contractor and hauled from the Beck Borrow area at the location shown on the drawings.
- D. Compost: Organic material stockpiled on site at the location shown on the drawings

2.2 SOURCE QUALITY CONTROL

- A. No tests or analyses are required for backfill materials.

PART 3 EXECUTION

3.1 SOURCE OF MATERIALS

- A. General Fill shall be obtained on site as specified in Part 2.1.
- B. On Site Vegetative Backfill shall be obtained at the existing stockpile location as specified in Part 2.1. Material from the existing stockpile may not be used as General Fill unless approved by the Engineer.
- C. Beck Borrow Vegetative Backfill shall be obtained from the Beck Borrow area as specified in Part 2.1. Material from the Beck Borrow area may not be used as General Fill unless approved by the Engineer.
- D. Compost shall be obtained at the existing stockpile as specified in Part 2.1. Material from the existing compost stockpile may not be used as General Fill or Vegetative Backfill unless approved by the Engineer.

3.2 PREPARATION FOR PLACEMENT

- A. Identify required lines, levels, contours, and datum.
- B. Stake and flag locations of known utilities.
- C. Locate, identify, and protect utilities that remain from damage, including all wells not designated for demolition. Notify utility companies for utilities that may be affected by the work, or that cross the work area.
- D. Protect bench marks and existing structures from excavating equipment and vehicular traffic.
- E. Cut out soft areas of subgrade or existing underlying fill as approved by engineer. Backfill with material type specified for subsequent fill, and compact to minimum density requirements for subsequent fill material as specified in Part 3.04.

- F. Dewater area as needed prior to fill placement. Unless directed by Engineer, fill may not be placed if groundwater or ponded surface water is present.

3.3 PLACEMENT AND COMPACTION

A. General Backfill

1. Place fill in lifts not to exceed 2 feet in loose thickness.
2. Finish grade to within ± 0.3 foot of line and ± 0.1 % of grade shown on the Drawings.
3. Maintain positive surface drainage to minimize ponding of water on fill.
4. Material shall not be frozen when placed. Material shall not be placed on ice. Material shall not be placed on frozen material unless directed by Engineer. Frozen material shall be scarified, disked, or otherwise made suitable to receive subsequent fill and provide an acceptable bond between lifts, as approved by Engineer.

B. Vegetative Backfill includes both On Site Vegetative Backfill and Beck Borrow Vegetative Backfill.

1. Place fill in a single lift of 6 inches in loose thickness over the area designated to receive Vegetative Backfill on the Drawings.
2. Finish grade to within ± 0.3 feet of line and ± 0.1 % grade shown on the Drawings for embankment slopes and within ± 0.3 foot on embankment crests.
3. Material shall not be frozen when placed. Material shall not be placed on ice. Material shall not be placed on frozen material unless requested by Engineer.

C. Compost

1. Compost shall be mixed with On Site Vegetative Backfill at a ratio of 40:1.
2. Compost shall be mixed with Beck Borrow Vegetative Backfill at a ratio of 6:1.

3.4 SITE GRADING

- #### **A.**
- Grade all areas including excavated filled, and transition areas to obtain the finished surface shown on Drawings, to the tolerances specified in Part 3.3 above. Finished surface shall be reasonably smooth and free from irregular surface changes.

3.5 FIELD QUALITY CONTROL

- A. Contractor shall perform all initial control and grade staking during construction. Final compliance data will be reviewed by Engineer. Contours and elevations not meeting the requirements of these specifications shall be corrected at the Contractor's expense.

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement for general fill will be based on the cubic yards of material placed as measured by Engineer based on survey.
- B. Measurement for on-site vegetative backfill will be based on the cubic yards placed as measured by Engineer based on survey.
- C. Measurement for Beck Borrow vegetative backfill will be based on bank cubic yards excavated from the Beck Borrow Area as calculated by Engineer based on survey.

4.2 PAYMENT

- A. Payment for general fill will be based on the cubic yard amount as shown on the Bid Form, Bid Item 11 – Regrade Pond.
- B. Payment for loading, hauling, and placing on-site vegetative backfill will be based on the cubic yard amount as shown on the Bid Form, Bid Item 14 – Load, Haul, and Place On-site Vegetative Backfill. Mixing of compost is considered incidental to this bid item and no separate payment shall be made.
- C. Payment for loading, hauling, and placing Beck Borrow vegetative backfill will be based on the cubic yard amount as shown on the Bid Form, Bid Item 15 – Load, Haul, and Place Beck Borrow Vegetative Backfill. Mixing of compost is considered incidental to this bid item and no separate payment shall be made.

END OF SECTION

SECTION 02234
SUBBASE COURSE

PART 1: GENERAL

1.1 DESCRIPTION

- A. This work is constructing a subbase course (Bid Item 16 – Provide, Place, and Compact Road Base and Bid Item 19, Provide, Place, and Compact Road Base) of crushed materials meeting the specified gradations and other quality criteria specified herein.

1.2 REFERENCES

AASHTO T11	Amount of Material Finer Than No. 200 (0.075 mm) Sieve in Aggregate
AASHTO T27	Sieve Analysis of Fine and Coarse Aggregates
AASHTO T89	Determining Liquid Limit of Soils
AASHTO T90	Determining the Plastic Limit and Plasticity Index of Soils
AASHTO T176	Sand Equivalent Value of Soils and Fine Aggregate
AASHTO T96	Resistance to Degradation By Abrasion and Impact in the Los Angeles Machine
AASHTO T99 (ASTM D698)	Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 5-lb (2.5 kg) Rammer and 12-Inch (305 mm) Drop
ASTM D5821	Determining the Percentage of Fractured Particles in Coarse Aggregate
AASHTO T191 (ASTM D1556)	Density of Soil in-Place By Sand Cone Method
AASHTO T310 (ASTM D6938)	In-Place density and water content of the soil and soil aggregate by Nuclear Method (Shallow Depth)

1.3 DENSITY CONTROL TESTING

- A. Field Density Testing
1. Meet the quality control and quality assurance testing requirements in section 01400, Contractor Quality Control and Owner Quality Assurance.
 2. In-place field density tests for quality assurance are at Owner expense meeting AASHTO T191 (ASTM D1556) Sand Cone method or AASHTO

T310 (ASTM D 6938), Nuclear Densometer method. Quality assurance field density testing frequency is at the discretion of the Engineer.

3. Retesting of failing areas is at the expense of the Contractor.

B. Laboratory Maximum Density and Optimum Moisture

1. Moisture density curves must be provided by the Contractor for each base material supplied. These will be provided at the expense of the Contractor.

C. Materials Submittals

1. Submit to the Engineer gradations, moisture density curves and other preliminary test results for sources to be used for base materials prior to delivery to the site for approval by the Engineer. If recycled materials are proposed, California Bearing Ratio test data must be submitted to the Engineer to assure consistency with design requirements.

PART 2: PRODUCTS

2.1 GENERAL

- A. Furnish select subbase material meeting the applicable aggregate quality.

2.2 UNCRUSHED SUBBASE

- A. Furnish material consisting of hard, durable stone, gravel or other similar materials mixed or blended with sand, stone dust, recycled concrete and/or asphalt or other binding or filler materials produced from Engineer approved sources, providing a uniform mixture meeting these specifications and compacted into a dense and well-bonded subbase. Oversize material of acceptable quality may be crushed and used in the base material, if the blend meets the specified gradations.
- B. Assure the material retained on the No.4 sieve has a wear not exceeding 50 percent at 500 revolutions as determined by AASHTO T96.

2.3 CRUSHED SUBBASE

- A. Furnish material having both fine and coarse crushed stone or crushed gravel, and/or natural gravel, and when approved, blended with soil, sand, screenings, recycled concrete and/or asphalt or other materials.
- B. Furnish crushed gravel or stone consisting of hard, durable particles, not containing excessive flat, elongated, soft or disintegrated rock, dirt, or other

deleterious matter, and having a wear not exceeding 50 percent at 500 revolutions as determined by AASHTO T96.

- C. Use production methods that produce a percent of fractured rock in the finished product that is constant and uniform. Crush aggregate so that at least 25% of the material is retained on the No.4 sieve and has one or more mechanically fractured faces.

2.4 GRADATION

- A. Produce material, including any added binder or filler, meeting the following Table of Gradations as determined by AASHTO Methods T11 and T27:

TABLE OF GRADATIONS

PERCENTAGES BY WEIGHT PASSING SQUARE MESH SIEVES

Passing	4" Minus	3" Minus	2" Minus	1 1/2" Minus	1" Minus
4 Inch	100				
3 Inch	---	100			
2 Inch	---	---	100		
1 1/2 Inch	---	---	---	100	
1 Inch	---	---	---	---	100
No.4	25-60	25-60	25-60	25-60	25-70
No.40	10-30	10-30	10-30	10-30	10-30
No.200	2-10	2-10	2-10	2-10	2-10

- B. Up to 5% "oversized" material is permitted provided that the "oversized" material passes the screen size immediately larger than the top size specified. The material between the maximum screen opening and the No.4 sieve shall be reasonably well graded.
- C. Suitability of the aggregate is determined by the gradation testing of material placed in the project as required in the Contract documents, within the allowable limits described by the Table of Gradations for the particular grading specified.
- D. Assure the liquid limit for the aggregate fraction passing a No.40 sieve does not exceed 25, nor the plasticity index exceed 6, as determined by AASHTO T89 and T90.

2.5 WATERING:

- A. Use uncontaminated water meeting Circular DEQ-7 Numeric Water Quality Standards.

PART 3: EXECUTION

3.1 PREPARATION

- A. Immediately before placing the base course, blade smooth and shape the underlying subgrade, subbase or base course to the plan cross section before the base course is placed on the roadway. Do not place subbase course on wet or muddy subgrade or subbase course. Maintain at least one completed area of finished and accepted subgrade or subbase course in advance of placing base course.

3.2 PLACEMENT AND SPREADING

- A. Mix and place the material in maximum 6-inch (15 cm) horizontal layers loose thickness. Deposit and spread each load of material on the prepared subgrade, or on a completed subbase course layer continuously without breaks. Assure hauling over the subgrade or over any completed subbase course does not damage the subgrade, subbase or base course.
- B. Spread using dump boards, spreader boxes, or moving vehicles equipped to distribute the material in a uniform layer or a windrow. Place and spread the material in a uniform layer to the specified depth without causing segregation.
- C. For multiple layers, mix each layer as specified above. Blade smooth and compact each layer before placing the succeeding layer.
- D. Uniformly add water, when required, on site and place in amounts required to compact the material as necessary to aid in densification and to limit segregation. Maintain an adequate water supply during the work. Assure the equipment used for watering is of the capacity and design to provide uniform water application. Once water has been applied to the material, blade-mix it the full depth by alternately blading the entire layer to the centerline and back to the roadway edge.
- E. Apply water during the work to control dust and to maintain the base course in a damp condition.
- F. Where crushed subbase is specified, produce a product with at least 25% of the material retained on the No.4 sieve having one or more fractured faces.
- G. Water required for compacting base gravel may be obtained from the municipal system if approved by the Owner, or from other sources approved by Engineer.
- H. Compact the material using appropriate tamping equipment or power rollers. Correct all irregularities or depressions that develop under rolling by scarifying the material and adding or removing material, as required, until the surface meets specifications.

- I. Blade and compact alternately, as required to produce the specified surface until final inspection. Tamp the material along curbs, headers, manholes, and similar structures and all places inaccessible to rollers using approved mechanical tampers or hand tampers to meet field density requirements.

3.3 FIELD DENSITY REQUIREMENTS

- A. Furnish water and roll to obtain a minimum field density of 95 percent of the maximum dry density determined by AASHTO T99. No separate compensation is allowed for rolling and watering the subbase course other than the subbase course bid item or items listed on the Contract documents.

3.4 SURFACE TOLERANCES

- A. Finish the subbase course so that when tested using a 10-foot (3 m) straight edge placed on the surface with its centerline parallel to the slope, the maximum surface deviation from the straight edge does not exceed 1/2-inch (12.7 mm). Additionally, the finished grade cannot deviate more than 0.1 foot (30 mm) at any point from the staked elevation and the sum of the deviations from two points not more than 30 feet (9.14 m) apart cannot exceed 0.1 feet (30 mm).
- B. Perform all subbase course corrections to meet the above tolerances using approved methods and materials.

PART 4: MEASUREMENT AND PAYMENT

4.1 CUBIC YARD BASIS: SUBBASE COURSE

- A. This item is measured and paid for by the cubic yards crushed, subbase course of the specified gradations, complete in place, at the contract unit price bid for 3" Minus Crushed Subbase Course, which constitutes full compensation for furnishing, loading, hauling, spreading, blending, shaping, watering, and compacting the subbase course material, and for all tools, labor and incidentals necessary to complete this item.
 1. Quantities for payment for trails and access road shall be computed as the centerline length of roads and trails as measured by the Engineer multiplied by the design width and depth of the road or trail. No measurement of material placed outside the neat lines of the design will be done.
 2. Quantities for payment for parking lots shall be computed by the Engineer as the designed area of the parking lot multiplied by the design depth. No measurement shall be made for material placed outside the neat lines of the design.

B. Payment is made under:

1. Payment for subbase course will be based on the cubic yard amount as shown on the Bid Form, Bid Item 16 – Provide, Place, and Compact Road Base and Bid Item 19 – Provide, Place, and Compact Road Base.

END OF SECTION

SECTION 02241
BARRIER ROCKS

Added Section.

PART 1 GENERAL

1.1 DESCRIPTION

- A. This work consists of furnishing and placing barrier rocks at designated areas on the project drawings or as directed by the Engineer.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 GENERAL

- A. Furnish hard, durable, angular barrier rock that is resistant to weathering and water action and free of organic or other unsuitable material. Do not use shale, rock with shale seams, or other fissured rock that may break into smaller pieces in the process of handling and placing.
- B. Furnish barrier rocks that approximately measure 8 cubic feet (2.5 – 3.5 feet in nominal diameter as measured on the long axis). Backfill around embedded barrier rocks by tamping with hand tools and/or mechanical equipment. Space barrier rocks at 5 feet clearance as measured from edge to edge.
- C. Install barrier rocks according to the project drawings or as directed by the Engineer.

PART 4 MEASUREMENT AND PAYMENT

4.1 PAYMENT

- A. Barrier rock placement will be measured and paid for by the each (EACH).

END OF SECTION 02241

SECTION 02270
SOIL EROSION AND SEDIMENT CONTROL

PART 1: GENERAL

1.1 SUMMARY

A. STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

1. The Contractor is responsible for creating and filing a Notice of Intent (NOI) Form and Storm Water Pollution Prevention Plan (SWPPP) for this project under the current Montana Pollutant Discharge Elimination System (MPDES) with the Montana Water Quality Division for storm water associated with construction activities. All fees associated with this permit application and any subsequent annual fees will be paid for by Contractor.
2. The Contractor shall be required to comply with all requirements of the 2013 (or current) "General Permit for Storm Water Discharges Associated with Construction Activity" (General Permit). Note that if the project starts in 2017, and extends into 2018, Contractor will need coverage under both the 2013 and 2018 General Permits. The Contractor shall create a Storm Water Pollution Prevention Plan (SWPPP), and update this plan as required during construction for mitigating erosion and sediment control. The Contractor is responsible for installing, maintaining and preserving all erosion control measures for the Project in conformance with the SWPPP and any Montana Department of Environmental Quality and EPA regulations related to storm water discharge. The Contractor shall be responsible for performing all Monitoring, Reporting, and Records Retention Requirements per the General Permit. The Contractor shall be responsible to make any necessary changes to the SWPPP to prevent damage as a result of storm water runoff from this site using Best Management Practices.
3. The Contractor must have a copy of the NOI Confirmation of Receipt Letter from DEQ providing coverage to discharge storm water under the General Permit, a copy of the SWPPP, and copies of the Contractor's reporting documentation on site at all times during construction. The Contractor is solely responsible for any and all damages and/or fines that may result from runoff from this site during the duration of this contract. The Contractor shall provide all monitoring and reporting records to the Engineer. The Contractor shall submit all monitoring reports within two days after completion of the report. Additionally, Contractor shall keep a copy of their updated SWPPP map on site at all times, and this map shall show all current locations of BMPs on the project.
4. The Contractor shall be responsible to maintain all erosion control measures throughout the warranty period. Once final stabilization of the Project is complete, the Contractor shall be responsible to remove erosion control measures, such as silt fencing, that are no longer necessary to contain sediment. The Contractor shall notify the Owner, prior to final acceptance or any specified warranty period, when such erosion control measures will be removed, and this work shall be considered an item covered by the Project warranty.

5. Any penalties due to non-compliance with the General Permit requirements shall be the responsibility of the Contractor.
 6. The Contractor is responsible to submit Notice of Termination (NOT) form to DEQ when the construction activity is complete and the site has achieved final stabilization.
 7. The Contractor shall provide copies of all documentation related to storm water permitting efforts, to include copies of the NOI and SWPPP, the NOI Receipt Confirmation Letter, monitoring reports, NOT, and any related documents to Engineer.
- B. Contractor should note that the storm water discharge permit does not cover construction dewatering associated with trench excavation. Any permitting required to discharge construction dewatering shall be obtained by the Contractor. The Contractor may contact the Montana Department of Environmental Quality to obtain permit applications and associated fees for construction dewatering.
- C. Contractor shall be responsible for all permits fees, including any fees associated with re-application or renewal.

1.2 QUALITY ASSURANCE

- A. Requirements of regulatory agencies:
1. Comply with all applicable requirements of local, state, and federal agencies.
 2. Comply with the State of Montana DEQ, Water Quality Act 75-5-101 MCA, *et seq.*; and the Administrative Rules of Montana (ARM), 17.30.1101, ARM 17.30.1301, *et seq.*; and 17.30.601, *et seq.*
- B. The temporary erosion control plan should consider staging of construction and should address movement of sedimentation fences as construction progresses, temporary seeding and use of mulch, netting, sod, etc.

1.3 SUBMITTALS

- A. Submit copies of all documents required for permitting and authorizations as specified within this section or as required by all local, state and federal regulations.
- B. Provide all written reports required by the permitting authority.
- C. Comply with the submittal requirements of Section 01010.

PART 2: PRODUCTS

2.1 GENERAL

- A. Products used for Erosion Control and Best Management Practices shall be in conformance with the details on the plans, and shall meet all local, state, and federal standards.

PART 3: EXECUTION

3.1 EROSION CONTROL MEASURES

- A. The Contractor shall comply with all requirements of the SWPPP and General Permit. The Contractor shall monitor the site per the General Permit and make any changes to the SWPPP to add or amend the erosion control measures. All erosion control BMP's shall be in place prior to the start of construction disturbance in the affected area. The following general guidelines shall be used to control erosion, although this is not an exhaustive list:
 - 1. Route existing surface runoff and underground drainage within the project area to sediment basins, and pipe the flow to the nearest catch basin before final discharge.
 - 2. Divert surface waters that would otherwise enter the project area to prevent their contamination.
 - 3. Minimize the area of unprotected soil.
 - 4. Stabilize exposed soil as soon as practical.
 - 5. Trap transported sediments before entering the state water bodies.
 - 6. Incorporate permanent erosion control features as needed to control sediment from leaving the site.
 - 7. Reseed disturbed areas as soon as practical.
 - 8. Inspect regularly, especially after rainstorms, per the monitoring requirements.
 - 9. Repair or replace any damaged or missing items.
 - 10. Minimize disturbance to any existing vegetation (grass and trees).
- B. Contractor shall install BMPs as indicated within their SWPPP, and as called for on the erosion control plans. All BMPs, whether temporary or permanent, shall be included in the pay item for erosion control.

4.0 MEASUREMENT AND PAYMENT

- 4.1 Payment associated with soil erosion and sediment control, to include all permitting, shall be included within the pay item Soil Erosion and Sediment Control as listed on the Bid Sheet. Payment shall include all costs associated with preparation and submittal of NOI and SWPPP to DEQ, all associated fees and costs associated with complying with all implementation and documentation under the MPDES General Permit. This item shall include all installation, maintenance, and removal (if required) of all sediment control structures and BMP's, temporary and permanent, included in the SWPPP and on the plans, and necessary to comply with local, state, and federal standards. This work shall also include any work associated with monitoring and reporting for permit compliance.
- 4.2 No measurement shall be conducted for this item.
- 4.3 Payment shall be made at the lump sum rate shown on the Bid Form for Soil Erosion and Sediment Control. One-half of the lump sum payment shall be made when the remainder of the project is 50% complete (as measured by the amount paid for work items). The remaining 50% shall be paid upon project completion.

END OF SECTION

SECTION 02280
**STREAM CHANNEL AND OUTLET
STRUCTURE**

PART 1 GENERAL

1.1 SECTION INCLUDES

This Section includes all hauling grading, excavation, and backfill required for the outlet structure and channel construction (Bid Item 13—Construct Outlet Channel) needed to complete the Work. This shall include supplying and installing the precast outlet structure and fish screen (Bid Item 12--Provide and Install Pond Outlet Structure), excavating, hauling and placing material excavated from the outlet channel and furnishing other materials in accordance with the Drawings and Specifications.

1.2 RELATED SECTIONS

Section 02210 - Fill Material and Placement

Section 02234 - Sub Base Course

1.3 SUBMITTALS

Submit the following to the Engineer:

- A. Materials Source/Product Data: Submit material source and manufacturer specification on items proposed for use and as specified herein.

1.4 REFERENCES

Codes and Standards: Comply with provisions of following, except as otherwise indicated:

- A. AASHTO - M147 - Materials for Aggregate and Soil-Aggregate.
- B. AASHTO T11 and T27 or ASTM C136 - Methods for Sieve Analysis of Fine and Coarse Aggregates
- C. ASTM D75 - Standard Practice for Sampling Aggregates.
- D. ASTM D422 - Standard Method for Particle-Size Analysis of Soils.
- E. For Backfill and Compaction - Reference standards as listed in Section 02210, Part 1.04.

PART 2 PRODUCTS

2.1 OUTLET STRUCTURE BACKFILL

- A. Use 3"- Compacted Sub Base Course as a base for the outlet structure. All other backfill surrounding the outlet structure shall be spoils salvaged from the excavation for the structure unless such spoils are inappropriate for use as backfill as determined by Engineer.

2.2 SOURCE QUALITY CONTROL

- A. Tests and analysis of sub base course will be performed in accordance with applicable ASTM test methods.
- B. If tests indicate materials do not meet specified requirements, change material and retest.
- C. Compliance testing will be as requested by Engineer.

PART 3 EXECUTION

3.1 SOURCE OF MATERIALS

- A. Sub Base Course shall be obtained from a commercial source of crushed aggregate.

3.2 EXCAVATION

- A. All excavation for the outlet structure and stream channel shall meet with the specifications of Section 02200.

3.3 OUTLET STRUCTURE BACKFILL

- A. Place backfill in lifts not to exceed 18 inches in thickness (loose). Compact using vibratory equipment until no deflection is observed under the vibratory equipment. If hand equipment is used for compaction, place and compact backfill in lifts not to exceed 12 inches in thickness (loose).
- B. Excess excavated material remaining after backfill of the outlet structure shall be incorporated into the regrading within the confines of the pond.
- C. Compact Sub base course used in the base for the outlet structure using vibratory equipment until no deflection is observed.

4.0 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No measurement shall be made for the precast outlet structure and fish screen.

- B. The outlet channel shall be measured as the number of linear feet of channel constructed beginning at the outlet of the outlet structure and ending at the location shown on the drawing. Measurement shall be made along the centerline of the channel.

4.2 PAYMENT

- A. Payment for the precast structure and fish screen shall be made at the lump sum price shown on the Bid Sheet, Bid Item 12 – Provide and Install Pond Outlet Structure, when the work has been completed and accepted.
- B. Payment for the outlet channel shall be made at the unit price per foot of channel shown on the Bid Sheet after the work has been completed and accepted.

END OF SECTION

SECTION 02725
DRAINAGE CULVERTS

PART 1: GENERAL

1.1 DESCRIPTION

- A. Furnish and install all drainage culverts and other appurtenant structures as specified in the Contract (Bid Item 21 – Provide and Install ADA Platform Foundation) and this section. Pipe strength classifications are specified on the plans, listed in the Contract Documents or herein.

1.2 CERTIFICATION BY MANUFACTURER

- A. Furnish a manufacturer's certification on all pipe, certifying that the pipe and fittings meet the contract requirements.

1.3 REFERENCES

AASHTO M 36	Corrugated Galvanized Steel Pipe and Pipe Arches
AASHTO M218	Galvanized Steel Coil
AASHTO M245	Pre-Coated Galvanized, Corrugated Steel Pipe and Pipe Arches
AASHTO M274	Type II Aluminized Corrugated Steel Pipe and Pipe Arches
AASHTO M294	Corrugated Polyethylene Pipe (HDPE)
ASTM D361	Low Head Pressure RCP
ASTM C76	Reinforced Concrete Pipe
ASTM C443	O-ring Rubber Gaskets
ASTM C506	RCP - Arch Pipe
ASTM C507	RCP - Elliptical Pipe
ASTM C655	RCP - Tongue & Groove Pipe
ASTM C665	RCP – D-Load Pipe
ASTM A761	Corrugated Steel Structural Plate
ASTM C789	Precast Reinforced Concrete Box Sections
ASTM C850	Precast Reinforced Concrete Box Sections

PART 2: PRODUCTS

2.1 GENERAL

- A. Furnish all culvert piping as specified in the Contract Documents and meeting the materials and testing requirements of this Section. Furnish the pipe sizes and strength classifications shown in the Contract documents.

- B. References to ASTM, ANSI or AASHTO designation, means the latest revision at the time of call for bids.
- C. Assure all pipe is clearly marked with type, class and/or thickness as applicable. Assure lettering is legible and permanent under normal handling and storage conditions.
- D. Furnish the joint type, class, thickness designation, casting, lining, marking, testing, etc. as specified.
- E. Culverts: Culverts shall be defined as open ended pipes in inlet or outlet control. If plastic pipe is used in Culvert applications, concrete headwalls or prefabricated metal end sections shall be used to protect the pipe ends from Ultraviolet Radiation. All culverts larger than 15-inch diameter shall have end treatments conforming to the embankment side slopes such as flared end terminal sections (FETS) or road approach culvert end treatment (RACET). The engineer shall determine if cut-off walls and edge protection are necessary to protect the installation from erosion.

2.2 PIPE MATERIALS

A. Concrete Pipe

- 1. Furnish reinforced concrete culvert pipe meeting ASTM C76, C506, C507 or C655. Use round reinforced pipe having O-ring rubber gasket joints meeting ASTM C443 with the O-ring gasket confined in the pipe tongue groove.

B. Corrugated Metal Pipe

- 1. Furnish corrugated metal pipe meeting ASTM A 760(AASHTO M36). Connections must be made with minimum coupling band width of 10-1/2". When specified by the Engineer, materials shall meet the following standards:

ASTM A760 (AASHTO M36)	Specifications for Corrugated Steel Pipe, Metallic-coated for Sewers and Drains
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ASTM A762 (AASHTO M245)	Specifications for Corrugated steel Pipe, Polymer Pre-coated for Sewers and Drains
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ASTM A742 (AASHTO M246)	Specifications for Steel Sheet, Metallic Coated and Polymer Pre-coated for Corrugated Steel Pipe
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ASTM A929 (AASHTO M274)	Specifications for Steel Sheet Metallic Coated by the Hot Dip Process for Corrugated Steel Pipe. (Aluminized Type II)
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C. An Owner may select other materials as appropriate for applications where an Engineer has reviewed the circumstances and provided specifications for installation. When specified by an Engineer, materials shall meet the following standards. Refer to

- | | | |
|----|------------|--|
| 1. | ASTM A761 | Corrugated Steel Structural Plate |
| | ASTM C 789 | Precast Reinforced Concrete Box Sections |
| | ASTM C 850 | Precast Reinforced Concrete Box Sections |

2 Furnish HDPE Pipe with a corrugated exterior and a smooth interior waterway. Pipe must be made from virgin polyethylene (PE) compounds with dimensions and markings to conform to AASHTO M252, M294 and MP7. Pipe joints must meet ASTM E-1417 and ASTM D3212 standards for watertight joints.

AASHTO M252	Corrugated Polyethylene Drainage Pipe
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AASHTO M294	Standard Specification for Polyethylene Pipe
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ASTM D3350	Standard Specification for Polyethylene Pipe and Fittings
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ASTM E1417	Liquid Penetration Examination
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ASTM D3212	Joints for Sewer Plastic Pipes Using Flexible Elastomeric Seals
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PART 3: EXECUTION

3.1 PIPE INSTALLATION

A. Excavation and Backfill

1. Excavate and backfill culverts in accordance with manufacturers specifications and in accordance with Section 99995.

2. Bedding material and backfill around and over culverts shall be compacted to 95% of maximum laboratory dry density, ASTM D690 for all culverts installed in roadway embankments, unless specified otherwise by Engineer

B. Responsibility for Materials

1. Be responsible for all material furnished. Replace all material found defective in manufacture or damaged in handling after delivery by the manufacturer. This includes furnishing all material and labor required for the replacement of installed material discovered defective before final acceptance of the work or during the guarantee period.
2. Be responsible for the safe storage of material for the work until it has been incorporated in the completed project.

C. Handling of Pipe

1. Deliver and distribute all Contractor furnished pipe. Load and unload pipe, fittings and accessories by lifting with hoists or skidding so as to avoid shock or damage. Do not drop the materials. Do not skid or roll pipe handled on skidways against pipe already on the ground.
2. In distributing the material at the work site, unload each piece opposite or near the place where it is to be laid in the trench. Keep the pipe interior and other accessories free from dirt and foreign matter at all times.
3. Handle pipe to prevent coating or lining damage. Repair or replace all coating or lining damage in a manner satisfactory to the Engineer.

D. Laying Pipe.

1. Lay and maintain all pipe to the specified lines and grades with fittings, at the specified locations.
2. Use tools and equipment meeting Engineer approval for the safe and convenient prosecution of the work. Carefully lower all pipe and fittings into the trench preventing damage to pipe materials and protective coatings and linings. Do not dump or drop materials into the trench.
3. Exercise care to prevent foreign material from entering the pipe as it is installed. When pipe laying is not in progress, close the open ends of pipe using a plug or other means approved by the Engineer. Remove and clean

all sand, gravel, concrete and cement grout that has entered the lines during construction.

E. Tolerances

1. Install pipe within 1/2-inch (13 mm) of the specified alignment and within 1/4-inch (6 mm) of the specified grade for pipe 15-inch (38 cm) in diameter and smaller and 1/2-inch (13 mm) of specified grade for pipe larger than 15-inch (38 cm) diameter. These tolerances apply to any point along the entire pipe length.

3.2 TESTS

A. Visual Inspection

1. Inspect culverts for line, grade and roundness. Repair or replace culverts that are out of round, excessively deflected, or not installed to line and grade requirements.

B. Joints

1. All joints shall be silt tight joints to prevent infiltration and exfiltration of soil and water.

END OF SECTION

SECTION 02910
SEEDING

PART 1: GENERAL

1.1 DESCRIPTION

- A. This section includes ground surface preparation and planting seed in areas described in the drawings or directed by the Engineer.

1.2 SUBMITTALS

- A. Submit to the Engineer method of seedbed preparation, including proposed equipment to be used for seedbed preparation and drill and hand broadcast seeding.

PART 2: PRODUCTS

NOT USED.

PART 3: EXECUTION

3.1 ALLOWABLE SEEDING MONTHS

- A. Perform seeding when the temperature and moisture are favorable to germination and plant growth. Seed preferably before June 1st and after October 1st of each year. Seeding dates must be approved by the Engineer.

3.2 SEEDBED PREPARATION AND SOWING

- A. Clear the areas to be seeded of all debris, vegetation, and other material determined by the Engineer to be detrimental to the preparation of a seedbed. Once the area is cleared prepare a suitable seedbed prior to seed application. The seed bed shall be prepared in a manner that will optimize plant germination and establishment. Seedbed shall be prepared by loosening compacted soil to a depth of 4 to 6 inches. Acceptable seedbed prep methods shall include disking or, in areas too compacted to disc, chisel plowing to appropriate depth, or by other methods approved by the Engineer (harrow, disk, chisel plow, roller, cultipacker, imprinter or approved equivalent). Ripping is not an acceptable form of seedbed preparation. Contractor shall avoid driving on the prepared seedbed with equipment that will compact the seedbed. Any oversize rocks (>6 inches) that are uplifted to the surface during seed bed preparation must be removed prior to seeding.

- B. Sow seed by drill seeding or hand broadcast seeding in the areas shown on the drawings. Application rates shall be provided by Engineer based on pounds live seed prior to seeding. The seed mix will consist of both heavy and light seed. Owner shall supply and deliver seed to a designated staging area. Contractor shall keep seed cool, dry, and rodent-free after delivery to the staging area. The quantity of seed provided will be sufficient for designated acreages at prescribed application rates plus 10%. If the seed supply is exhausted through application above the designated rate, Contractor will purchase sufficient additional seed mix specified by the Owner at no additional cost to the Owner.
- C. Drill Seeding: The seed drill shall be capable of accurately seeding native grass and forbs species. This requires a seed drill with multiple seed boxes for different seed sizes or an in-box seed agitator. Only heavy seed shall be drill seeded. Light seed shall be applied by the hand broadcast method. Provided seed for drill seed areas will be split into bags containing heavy seed and bags containing light seed and labeled as such.
- D. Hand Broadcast Seeding: Hand broadcast seeding shall occur in areas within 2 feet of the Racetrack Pond water surface where drill seeding would be potentially difficult due to wet conditions. Contractor shall plant seed using the broadcast method, whereby seed is scattered on the surface of the ground instead of planted in the ground. For areas where seed will be Hand Broadcast only, seed will not be split into heavy and light seed and both will be seeded during a single application. The light seed component of the seed mix used in Drill Seeding areas shall be hand broadcast after drill seeding is complete.
- E. Do not sow seed in winds that prevent proper imbedment into the surface.

3.3 CARE OF SEEDED AREAS

- A. Keep the seeded area moist until it has germinated and its continued growth is assured. Prevent erosion during watering. Water is incidental to the item "Seeding."
- B. Protect all seeded areas from traffic or pedestrian use with warning barricades or other Engineer-approved methods.
- C. Maintain the seeded area, performing any required watering and mowing until the seed is firmly established. Prevent weeds and other undesirable vegetation from establishing in the seeded area. Mow weeds and rake and remove the clippings from the areas.
- D. Replace any seeded areas failing to germinate which have died or been damaged

by construction activities. Replace such areas to meet the contract requirements. The contract warranty period applies to this item.

PART 4: MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. Seeding will be measured by the Engineer using GPS survey methods following seed placement. Separate measurement shall be made for broadcast and drill seeding.
- B. Drill seeding shall be paid for at the unit price bid per acre including seedbed preparation, and seeding, complete in place as accepted by the Engineer.
- C. Broadcast seeding shall be paid for at the unit price bid per acre including seedbed preparation, and seeding, complete in place as accepted by the Engineer.
- D. Payment indicated to include complete compensation for all labor, equipment, materials and incidentals required for the completion of the work.

END OF SECTION

SECTION 02920
WETLAND SOD MAT SALVAGE, STORAGE AND
TRANSPLANT

PART 1: GENERAL

1.1 DESCRIPTION

- A. This section includes salvage of onsite wetland sod mats, temporary onsite storage of salvaged wetland sod mats and transplanting of wetland sod mats after final grading and Vegetative Backfill placement is complete.

1.2 WORK SEQUENCE

- A. Wetland sod mats shall be salvaged before any earthmoving activities are performed that may damage sod. Construction BMPs shall be installed and sediment detention ponds including sod storage areas shall be constructed prior to sod salvage.

PART 2: PRODUCTS

NOT USED.

PART 3: EXECUTION

3.1 GENERAL

- A. Salvage wetland sod from areas shown on the drawings and per these specifications. Location of wetland sod for salvage shall be staked by the Engineer. Wetland sod shall be salvaged to a depth of 8 inches. Wetland sod shall be divided into mats of a size where mats can be easily transported. Sod mats shall not be larger than 3 feet by 6 feet. Salvaged wetland sod mats shall be transported to the temporary sod storage areas identified on the drawings. Place sod mats in the storage areas with the vegetated side up and abutted against adjacent sod mats to prevent drying of mats during storage.
- B. On completion of pond grading, transplant wetland sod mats from the temporary sod storage areas to their final placement areas shown on the drawing and per these specifications. Engineer shall stake exact locations of wetland sod mat transplant areas. Wetland sod mats shall be placed with the vegetated side up and tightly together to avoid drying of soil and vegetation. Edges of wetland sod mats shall be backfilled with Vegetative Borrow to ensure smooth transition to surrounding surfaces.

PART 4: MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. Salvage, Storage, and Transplant of wetland sod is measured by the square foot as measured by the Engineer using a hand held GPS unit. Wetland Sod is paid for at the unit price bid per square foot including salvage, transport, storage, and transplant of wetland sod as completed in place and accepted by the engineer.
- B. Payment indicated to include complete compensation for all labor, equipment, materials and incidentals required for the completion on the work.

END OF SECTION

SECTION 03210
REINFORCING STEEL

PART 1: GENERAL

1.1 DESCRIPTION

- A. This work is furnishing and placing reinforcing steel or wire fabric meeting the quality, type and size specified in the contract (Bid Item 21 – Provide and Install ADA Platform Foundation).

1.2 REFERENCES

ASTM A-615	
ASTM A-705	
AASHTO M 31	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
AASHTO M 32	Cold Drawn Steel Wire for Concrete Reinforcement
AASHTO M 55	Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement
AASHTO M 54	Fabric Deformed Steel Bar or Rod Mats for Concrete Reinforcement

PART 2: PRODUCT

2.1 Furnish all new material meeting the following requirements.

- A. Bar Reinforcement
1. Furnish deformed reinforcement steel meeting ASTM A 615, (AASHTO M31) or ASTM A705, Grade 40 or Grade 60.
 - a. Small quantities purchased from warehouses may, at the Engineer's direction, be accepted if bend tested under ASTM A615 or AASHTO M31. The test specimen must cold bend around a pin without cracking on the outside of the bent portion.
- B. Wire and Wire Mesh
1. Furnish wire meeting cold-drawn steel wire AASHTO M32 (ASTM A82) requirements.
 2. Furnish wire mesh for concrete reinforcement meeting AASHTO M 55 (ASTMA A 185).

3. Furnish bar mats meeting AASHTO M54 (ASTM A 184).

PART 3: EXECUTION

3.1 PROTECTION

- A. Protect steel reinforcement from damage at all times. Place steel free from dirt, detrimental scale, paint, oil and other foreign substance. Clean steel reinforcement having easily removed rust, loose scale, and dust using an approved method.

3.2 FABRICATION

- A. Furnish four copies of shop details and placing drawings for all reinforcing steel to the Engineer for approval. Once checked, the Engineer will return two marked-up sets of prints or drawings for correction. The Engineer's review is only for general conformity with the plans. Checking the detailed dimensions is the Contractor's responsibility. The Engineer's review does not relieve the Contractor's responsibility to furnish all material meeting the Contract requirements. Detail Reinforcing, steel meeting the ACI "Standard Details and Detailing of Concrete Structures" and the "Manual of Engineering and Placing Drawings for Reinforced Concrete Structures" published by the American Concrete Institute (ACI 315).
- B. Assure all bars are bent cold. Do not field bend any bar partially imbedded in concrete except as specified on the plans.
- C. Ship bar reinforcement in standard bundles, tagged and marked meeting the "Details and Detailing of Concrete Structures" (ACI 315) requirements.
- D. Concrete reinforcement and accessory details, not covered herein or on the drawings, must meet "Details and Detailing of Concrete Structures" and the "Manual of Engineering and Placing Drawings for Reinforced Concrete Structures" (ACI 315 and 315R) requirements.

3.3 PLACING AND FASTENING

- A. Accurately place and hold firm all steel reinforcement in the plan locations as concrete is being placed.
- B. Support and fasten together all reinforcement to prevent displacement due to construction loads. It is permissible to use on ground, where necessary, concrete support blocks having a minimum 4 square inches (2580 MM²) bearing area and having a compressive strength equal to the concrete being placed. Use approved bar chairs and spacers over form work. For concrete surfaces exposed to the

weather in the finished structure, assure the portions of all accessories within ½-inch (12.7 mm) of the concrete surface are noncorrosive or protected against corrosion.

- C. Overlap welded wire fabric for successive mats or rolls providing an overlap measured between outermost cross wires of each fabric sheet at least 2 inches (50.8 mm). Extend the fabric across supporting beams and walls to within 4 inches (101.6 mm) of concrete edges. It may extend through contraction joints. Adequately support the fabric during concrete placement to maintain its position in the slab using the methods previously described or by laying the fabric on a concrete layer of the required depth before placing the upper slab layer.
- D. Offset vertical bars in columns at least one bar diameter at lap splices. Furnish templates for all column dowels.
- E. Obtain Engineer approval for all splices not shown on the plans. Mechanical connectors for reinforcing bars may be used if approved.
- F. Do not use pebbles, pieces of broken stone, concrete rubble, broken brick or building blocks, metal pipe, or wooden block to position the fabric.
- G. Follow the minimum concrete protective covering for reinforcement below.
 - 1. Concrete deposited against ground: 76.2 mm (3 inches)
 - 2. Formed surfaces exposed to weather or in contact with the ground:
 - a. #6 bars or larger 50.8 mm (2 inches)
 - b. Smaller than #6 bars 38.1 mm (1-1/2 inches)
 - 3. Interior Surfaces:
 - a. Beams, girders and columns 38.1 mm (1-1/2 inches)
 - b. Slabs, walls and joists:
 - 1) #11 bars or smaller 19.05 mm (3/4-inch)
 - 2) #14 and #18 bars 38.1 mm (1-1/2 inches)
- H. For corrosive atmospheres or fire protection, see special provisions for minimum covering requirements.
- I. Obtain Engineer approval of reinforcement placement before placing concrete. Remove and replace concrete placed without Engineer approval of reinforcing.
- J. Straighten fabric reinforcement shipped in rolls into flat sheets before placing it.

3.4 WELDING

- A. When specified or approved, weld reinforcing steel meeting “Reinforcing Steel Welding Code” (AWS D 1.1). Do not weld at bends in bars. Do not tack weld crossbars without Engineer approval.

PART 4: MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. Reinforcing steel used in the work is not measured. The cost of furnishing and placing reinforcing steel is incidental and included in the unit price or lump sum price bid for various items of the work.

END OF SECTION

SECTION 03310
STRUCTURAL CONCRETE

PART 1: GENERAL

1.1 DESCRIPTION

- A. Furnish structural concrete meeting all specified requirements that is composed of Portland cement, aggregates, water. Furnish Ready-mixed concrete meeting ASTM C94 unless otherwise specified.

1.2 REFERENCES

ASTM C-94	Standard Specification for Ready-Mixed Concrete
ASTM C-150	Specification for Portland Cement
ASTM C-618	Specification for Coal Flyash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C-989	Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
ASTM C-595	Specification for Blended Hydraulic Cements
ASTM C-157	Performance Specification for Hydraulic Cements
ASTM C-33	Specification for Concrete Aggregates
ASTM C-260	Specification for Air-Entraining Admixtures for Concrete
ASTM C-494	Specification for Chemical Admixtures for Concrete
ASTM C-1017	Specification for Chemical Admixtures for Use in producing Flowing Concrete
ASTM D-98	
ASTM C-138	Test Method for Density(Unit Weight), Yield, and Air Content(Gravimetric) of Concrete
ASTM C-173	Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C-231	Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C-31	Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C-39	Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C-172	Practice for Sampling Freshly Mixed Concrete
ACI 301	Standard Specification for Structural Concrete for Buildings
ACI 305	Hot Weather Concrete
ACI 306	Cold Weather Concrete
ACI 318	Building Code Requirements for Reinforced Concrete

1.3 QUALITY ASSURANCE

- A. Codes and Standards: The codes and standards referred to in this section are declared to be part of this specification as if fully set forth herein. In addition, the following ACI Standards are incorporated in their entirety, unless specifically required otherwise:
1. ACI Standard 301, "Specifications for Structural Concrete for Buildings," American Concrete Institute, Edition.
 2. ACI Standard 318, "Building Code Requirements for Reinforced Concrete", American Concrete Institute, current edition.
 3. Concrete Reinforcing Steel Institute, "Manual of Standard Practice".
 4. International Building Code of I.C.B.O.
- B. Concrete Testing: The Contractor shall employ at its expense a testing laboratory acceptable to the Engineer to perform material evaluation tests and/or perform the mix design prior to placing any concrete. The Engineer will perform all acceptance testing during the onsite placement of the concrete. Retesting or additional testing of concrete or materials failing to meet the requirements of these specifications shall be done by the Contractor at no additional cost to the Owner.

PART 2: PRODUCT

2.1 CLASSIFICATION

- A. Concrete is classified as set forth below. Place the specified class of concrete for each structure element as specified. Concrete with prefixes "C" contain 1-1/2 inch (38.1 mm) size aggregate and those with "M" contain 3/4 inch (19.05 mm) size aggregate.. Concrete with prefixes "M" may be substituted for concrete with prefixes "C."
1. Use M-4000 concrete for curb and gutter, sidewalks, driveways, approaches, curb turn fillets and valley gutters and structural concrete.
 2. Use M-3000 concrete for manholes, storm drain inlets and miscellaneous or C-3000 Concrete Construction class.
 3. M-3000 is concrete with 3/4 inch (19-05 mm) maximum aggregate and a 28-day compressive strength of 3000 pounds per square inch (psi) (20.7 Mpa).

4. M-4000 is concrete with 3/4 inch (19.05 mm) maximum aggregate and a 28-day compressive strength of 4000 pounds per square inch (psi) (27.6 Mpa).
 5. C-3000 is concrete with 1-1/2 inch (38.1 mm) maximum aggregate and a 28-day compressive strength of 3000 psi (20.7 Mpa).
- B. If concrete strength or durability requirements established by design exceed the above strength classifications, the Engineer may specify additional concrete classifications to meet those requirements.

2.2 COMPOSITION OF CONCRETE

- A. Upon receipt of the notice of award of the contract, furnish the Engineer with names of suppliers and locations of sources of materials proposed for use.
1. Materials
 - a. Cementitious Material: Cementitious material consists of Portland cement meeting ASTM C 150, with or without the addition of cementitious or pozzolanic mineral admixtures meeting, ASTM C618 or ASTM C989, or blended hydraulic cement meeting ASTM C595 or hydraulic cement meeting ASTM 1157. Unless otherwise specified, assure cementitious material meets ASTM C 150 Type I or Type II. Assure cementitious material used in concrete is the same brand and type and from the same plant of manufacture as the cementitious material used in the concrete represented by the submitted field test data or used in the trial mixtures.
 - b. Aggregates: Assure aggregates meet ASTM C33. When a single size or a combination of two or more sizes of coarse aggregates are used, assure the final gradation meets the grading requirements of ASTM C33. Obtain concrete aggregates from the same source and use the same size ranges as the aggregates used in the concrete represented by submitted historical data, or used in trial mixtures.
 - c. Water and Ice: Use concrete mixing water and water to make ice meeting requirements of ASTM C94.
 - d. Admixtures: Use admixtures meeting the following requirements:
 - 1) Air entraining, admixtures - ASTM C260
 - 2) Chemical admixtures- ASTM C494

- 3) Chemical admixtures for use in producing, flowing concrete- ASTM C1017
- 4) Calcium Chloride - ASTM D98
- 5) Use admixtures in the concrete that are the same as those used in the concrete represented by submitted field test data or in trial mixtures.

2. Change of materials

- a. When brand, type, size, or source of cementitious materials, aggregates, water, ice or admixtures are requested to be changed, submit new field data or data from new trial mixtures or furnish evidence that indicates that the change will not adversely affect the relevant properties of the concrete for acceptance before using the concrete.

B. Performance and Design Requirements

1. Assure the cementitious material content is adequate to meet the specified requirements for strength, water-cement ratio and finishing requirements. For concrete used in floors, assure the cement content is at least that indicated in Table 2.1. For concrete exposed to freezing and thawing or concrete exposed to deicers, assure a maximum water-cement ration of 0.45.

TABLE 2.1
MINIMUM CEMENT CONTENT REQUIREMENTS

Nominal Maximum size of aggregate, in(mm)	Minimum cement content lb/yd ³ (kg/m ³)
1-1/2 (38-1)	470* (163.0)
1 (25.4)	520 (180.3)
3/4 (19-05)	540 (187-3)
3/8 (9-5)	641 (222.3)

* Minimum cement content is 520 lb/yd³ (180.3 kg/m³) and maximum H₂O/cement ratio of 0.45 if concrete will be exposed to freezing and thawing and/or in the presence of deicing chemicals.

2. Furnish concrete at the point of delivery having a slump of 4 inches (max) (100 mm) determined by ASTM C 143. Meet slump tolerances in ACI 117. When a plasticizing admixture is used meeting ASTM C 10 17 or when a Type F or G high range water reducing admixture meeting ASTM C494 is approved to increase the concrete slump, assure the concrete has a slump

of 2 to 4 inches (50-100mm) before the admixture is added and a maximum slump of 8 inches (200 mm) at the point of delivery after the admixture is added.

3. Assure the nominal maximum size of coarse aggregate does not exceed three fourths of the minimum clear spacing between reinforcing bars, one-fifth of the narrowest dimension between sides of forms or one-third of the thickness of slabs or toppings.
4. Concrete must be air entrained. Measure air content under ASTM C 138, C 173 or C231. Unless otherwise specified, ASTM C231 shall be used.

TABLE 2.2
TOTAL AIR CONTENT* OF CONCRETE
FOR VARIOUS SIZES OF COARSE AGGREGATE

Nominal maximum Size of aggregate mm, (in.)	Total air content, percent		
	Severe exposure	Moderate exposure	Mild exposure
Less than 9.53(3/8)	9	7	8
9.53 (3/8)	7.5	6	4.5
12.5(1/2)	7	5.5	4
19 (3/4)	6	5	3.5
25.4(1)	6	4.5	3
12.7(1-1/2)	5.5	4.5	3
50.8(2)	5	3.5	1.5
76.2(3)	4.5	3.5	1.5
152.4(6)	4	3	1

* Measure in accordance with ASTM C 138, C 173, or C 231.

Air content tolerance is +/- 1 1/2 percent

- a. When admixtures are specified in the Contract documents for particular parts of the work, use types specified. Use of calcium chloride or other admixtures containing chloride ions is subject to the limitations in Table 2.3 Chloride Ion Concentration. When approved, use calcium chloride in solution form only, when introduced into the mixture.
 - 1) Assure the maximum water soluble chloride ion concentrations in hardened concrete at ages from 28 to 42 days attributed to the ingredients including water, aggregates, cementitious materials and admixtures do not exceed the limits of Table 2.3. Use tests to determine water soluble chloride ion content meeting AASHTO T260. The

type of member described in Table 2.3 applies to the work as indicated in the Contract Documents.

TABLE 2.3
MAXIMUM ALLOWABLE CHLORIDE ION CONTENT

Type of Member	Maximum water soluble chloride (CI) Content in concrete, percent by weight of cement
Prestressed concrete	0.06
Reinforced concrete exposed to chloride in service	0.15
Reinforced concrete that will be dry or protected from moisture in service	1.00
Other reinforced concrete construction	.30

- b. When the average of the highest and lowest temperature during the period from midnight to midnight is expected to drop below 40°F (40°C) for more than three successive days, deliver concrete in accordance with ASTM C-94.
- c. Furnish the compressive strength and the water-cement or water cementitious, material ratio of concrete for each portion of the work as specified in the Contract documents.
 - 1) If cementitious or pozzolanic mineral admixtures meeting, ASTM C618 or ASTM C989 are used, the cement portion of the water-cement ratio must be the total weight of cementitious material.
 - 2) The maximum weight of fly ash, pozzolan or ground granulated blast-furnace slag included in the calculation of water-cementitious material ratio cannot exceed the following percentages of the total weight of portland cement plus fly ash, pozzolan and ground granulated blast-furnace slag:
 - 3) The combined weight of fly ash and pozzolan meeting ASTM C618 cannot exceed limits in ACI 318.. The fly ash and pozzolan present in an ASTM Type IP or IPM blended cement meeting ASTM C595 must be included in the calculated percentage.
 - 4) The weight of ground granulated blast-furnace slag meeting ASTM C989 cannot exceed 50 percent of the total weight

of cementitious material. The slag used in manufacture of a Type IS or ISM blended hydraulic cement meeting ASTM C595 must be included in the calculated percentage.

- 5) If fly ash or pozzolan is used in concrete with ground granulated blast-furnace slag, the portland cement constituent meeting ASTM C 150 cannot be less than 50 percent of the total weight of cementitious material. Fly ash or pozzolan must not constitute more than 25 percent of the total weight of cementitious material.
- 6) Strength requirements are based on the 28-day compressive strength determined on 6" x 12" (150mm x 300mm) cylindrical specimens made and tested under ASTM C31 and C39 respectively.

2.3 PROPORTIONING AND DESIGN OF MIXES

- A. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method used, use an independent testing facility acceptable to the Engineer for preparing and reporting proposed mix designs.
- B. Submit written reports of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed and approved.

PART 3: EXECUTION

3.1 CONCRETE MIXES

- A. Job-Site Mixing: Mix materials for concrete in appropriate drum type batch match mixer. For mixers of one cu. Yd., or small capacity, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released. For mixers of capacity larger than one cu. Yd., increase minimum 1-1/2 minutes of mixing time by 2.5 minutes for each additional cu. yd., or fraction thereof.
- B. Provide batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mix type, mix time, batch quantities, and amount of water introduced.
- C. Ready-Mix Concrete: Comply with requirements of ASTM C94, and as herein specified.

- D. During hot weather, or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ANSI/ASTM C94 may be required.
- E. When air temperature is between 85°F (30°C) and 90°F (32°C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90°F (32°C), reduce mixing and delivery time to 60 minutes.

3.2 CONSISTENCY

- A. Assure concrete is of such consistency that it will flow around reinforcing steel, but individual particles of the coarse aggregate, when isolated, show a coating of mortar containing its proportionate quantity of sand. The consistency of the concrete will be gauged by the ability of the equipment to properly place the concrete in its final position and not by the difficulty in mixing or transporting. Use the minimum quantity of mixing water necessary to provide workability within the ranges of slump specified.

3.3 MIXING

- A. Thoroughly mix concrete to assure a uniform distribution of the materials throughout the mass. Mix concrete only in quantities required for immediate use and place it within the time limits specified. Waste all concrete which initial set has begun. Retempering of concrete is prohibited. Aggregates, or bags of cement containing lumps or crusts of hardened material shall not be used. Mix concrete in an approved truck mixer meeting the requirements of ASTM C94 herein.
- B. The capacity of the plant and the transportation equipment must ensure delivery at a rate that will permit proper handling, placement and finishing at the point of delivery. Maintain the concrete delivery rate to provide for the continuous operation of placing, handling and finishing concrete as is practical. Maintain the interval between delivery of loads so that layers or lifts of concrete in place do not harden before succeeding layers or lifts are placed. In general, no lift or layer of concrete can remain exposed for more than 20 minutes before being covered by fresh concrete.
- C. The volume of mixed concrete in the mixing drum shall not exceed the manufacturer's rating, on the capacity plate.
- D. During freezing weather, other approved methods of measuring water will be permitted.
- E. A recording water metering device is always required at the primary point of the batching operation.

- F. Do not add water to concrete in transit. Water may be introduced into the mixer at the job site under direction of the Engineer, if the specified water-cement ratio is not exceeded. Water must be added in accordance with ASTM C94, Assure the drum revolves continuously after the introduction of the cement and water until the concrete is discharged.
- G. Begin mixing immediately after introduction of the cement and water and continue for at least 70 revolutions of the drum at mixing speed. This minimum revolution count will be waived when the concrete is produced at a central mixing plant. Not more than 100 drum revolutions can exceed 6 revolutions per minute. All other revolutions must be at agitating speed of not less than 2 or more than 6 revolutions per minute.
- H. Discharge the concrete at the job and place in its final position within 1- 1/2 hours after the introduction of the mixing water and cement. When the air temperature is 90°F (30°C) or above, place the concrete in its final position within 1 hour after the introduction of the mixing, water and cement. Concrete mixes with an approved set retarding admixture may be held an additional ½ hour beyond limits specified above.
- I. No mixed or agitated concrete that has remained in the drum of the truck mixer more than 10 minutes without agitation can be used. If the Engineer determines the concrete has not suffered any detrimental effects. It may be used, after remixing for a minimum of 20 revolutions of the drum at mixing speed, if it can still be placed in the forms within the specified time limits.
- J. Provide a revolution counter on each truck that registers the number of revolutions of the drum.
- K. Mount the counter so it can be easily read by both the operator and the Engineer.

3.4 PLACING CONCRETE

- A. Thoroughly compact concrete into its final position. Assure it is thoroughly consolidated around fittings and embedded items. Assure all reinforcement and embedded items are accurately placed as shown on the plans and are clean and free from coatings of dried mortar, detrimental rust, scale, oil or foreign matter. Place concrete meeting the applicable requirements of Sections 02528 and 02529.

3.5 CURING CONCRETE

- A. Thoroughly cure concrete surfaces subject to premature drying by covering as soon as possible with canvas, plastic sheets with sealed joints, burlap and sand or other satisfactory materials and keep concrete moist. If the concrete surfaces are not covered, keep them moist by flushing or sprinkling. Continue curing for at

least 7 days after placing the concrete. Concrete surfaces placed against forms may be cured by leaving the forms in place for at least 7 days, when approved.

- B. Protect concrete against freezing or other conditions detrimental to strength development meeting the applicable requirements of this specification.
- C. To aid finishing, side forms on ornamental work, curbs and sidewalks, railing and parapets may be removed after 12 hours, not to exceed 48 hours, depending on weather conditions. Continue moist curing during the concrete finishing operation.
- D. Untreated forms and existing concrete must be kept continuously wet for at least 1 hour before any concrete is placed. Keep wet until covered with concrete except that adequately treated forms must be thoroughly washed with a water spray immediately before placing the concrete.
- E. The curing of concrete, by either water curing or membrane curing, must be as follows unless otherwise approved by the Engineer.

1. Water Curing

- a. Keep all concrete top surfaces continuously moist after finishing, with a fine water spray, until the concrete has set. Cover the moist concrete with water or an approved curing covering.
- b. Cure concrete deck slabs and concrete floors for at least 7 days. Cure by placing burlap, cotton mats or other absorptive material as close behind the finishing operation as possible without marring the finished surface. Keep the absorptive material continuously moist for the full time it is used. The absorptive material may be kept in place for the entire curing period or it may be removed as soon as practical and the entire surface covered with approximately 1-1/2 inches (38.1 mm) of sand, kept continuously moist for the entire curing period.
- c. Remove forms and repair surface irregularities without interfering with any of the curing requirements. As soon as the vertical forms have been removed and the surface irregularities repaired, cover the concrete with absorptive material, kept continuously wet for the balance of the curing a period.

2. Impervious Membrane Curing

- a. Assure membrane curing compounds are delivered to the job in the manufacturer's original container, clearly labeled to show the name of the manufacturer and the contents. The clear curing

compound must be sufficiently transparent and free from permanent color that would change the color of the natural concrete. Use clear compound containing a fugitive dye having color sufficient to render the film visible on the concrete for at least 4 hours after application. The concrete surface must maintain its natural color after curing.

- b. Use a compound ready for use as shipped by the manufacturer. Dilute following the manufacturer's recommendations. Use curing compound only with written approval. Sampling will not be required if manufacturer's certification is available. Apply the curing compound under pressure with a spray nozzle to cover the entire exposed surface thoroughly and completely with a uniform film not exceeding manufacturer's specifications. Maintain the required pressure in the spray machine to force the material to leave the nozzle in a fine mist. Keep all concrete surfaces moist with a fine water spray or with wetted burlap until the sealing compound is applied. Keep the curing compound application close to the finishers of the top surface of concrete at all times. Seal the concrete immediately after the finishing operations have been completed, to the satisfaction of the Engineer.
- c. If it is necessary to allow workers or equipment on the surface before the 7 day curing period is completed, cover the top surface of sealed concrete with a protective cushion for runways. Use a cushion consisting of a moist, 1 –inch (25mm) minimum thick layer of fine sand, or layers of moist burlap that will prevent damage to the finished concrete. Cover the approved cushion with four by eight foot sheets of 3/4 inch(19mm) plywood laid over the cushion. Do not place the cushion material for at least 8 hours after the final application of the curing compound. Obtain the Engineer's written approval for any other proposed cushion material before use. Layers of plastic, visqueen or canvas are not an acceptable cushion material.
- d. Keep concrete, which has not completed its curing period, continuously moist during the stripping and surface repair operations. Remove all surface irregularities, repair all depressions, voids or holes, including those formed by trapped air, to the satisfaction of the Engineer. Immediately apply the curing compound before the surface has had an opportunity to dry out. Keep concrete, from which forms have been stripped, continuously moist until surface repair and finishing are completed and the impervious membrane curing has been applied.

3.6 WEATHER AND NIGHT LIMITATIONS

A. General

1. Stop concreting operations when darkness prevents obtaining the specified placing, and finishing work. Night operations may be conducted with written approval from Engineer and when approved artificial lighting is provided.
2. Cold weather concreting is governed by ACI 306 unless otherwise specified herein. Hot weather concreting methods is governed by ACI 305 unless otherwise specified herein. Except by specific written authorization, stop concreting operations when a descending air temperature in the shade and away from artificial heat falls below 40°F (4°C), or do not resume until an ascending air temperature in the shade and away from artificial heat reaches frozen foundation course or subgrade.
3. Assume all risk of placing concrete in cold weather. Placing concrete during cold weather does not relieve the Contractor of the responsibility for obtaining the specified results. Remove and replace all concrete injured by frost at Contractor expense.
4. Before any concrete is placed, remove all ice, snow and frost completely from the formwork receiving the concrete.
5. Heating and Placing Concrete
 - a. When concreting is authorized during cold weather, assure concrete temperature meets ASTM C94.
6. Protection of Concrete
 - a. During the curing period, if the air temperature is anticipated to fall below 32°F (0°C, provide an approved blanket type insulating material along the work for covering all concrete that has been in place for 7 days or less. If, at any time, the ambient temperature drops to 32°F(0°C) or less, protect the concrete using a method approved by the Engineer. The minimum method of protection under such conditions is as follows: between two layers of plastic sheeting, the insulating materials, with the exception of commercial blankets, must be spread loosely to a minimum depth of 6 inches (150mm), but in all cases, to the depth required to prevent freezing of, or frost damage to, the concrete. Maintain the blanketing material at least until the end of the regular specified curing, period which is not less than 7 days. The Engineer may

direct leaving the blanketing material in place for an additional period if the recorded temperatures indicate that additional curing may be necessary. If during the construction period the mean daily temperature is expected to fall below 40°F(4°C) for 3 consecutive days, furnish approved heating enclosures and devices capable of maintaining the surface temperature of the concrete in place between 55°F (13°C) and 80°F (26°C). The curing, period under these conditions is 7 days when Type I-II cement is used and 5 days when a pre-approved "high early strength" mix is used. At the close of the curing period, the heat may be reduced so that the temperature inside the housing does not decrease faster than 15° per hour until the temperature inside the housing is the same as outside.

- b. A Contractor may, at their own expense, field cure concrete cylinders with their in-place concrete and discontinue protection when those field cylinders reach 70 percent of design strength as indicated by the 28 day requirement of these specifications.
- c. Perform all concrete protection using methods consistent with ACI-306-1-87 and approved by the Engineer.

3.7 TESTING

- A. All concrete must be tested by an ACI Grade I or equivalent certified testing technician. Unless otherwise specified, the Engineer shall be responsible for all acceptance testing during the on-site placement of the concrete.

1. Materials

- a. The Engineer or their representative must have access to the ready mix production facility for sampling constituent materials during production to assure the materials meet these specifications and represent those stated on the approved mix design.

2. Standard Slump Tests

- a. The Engineer shall , during each day's placement, check the consistency of the concrete by slump test. A slump test will also be made each time that strength specimens are made . Slump tests are performed meeting ASTM C143"Method of Test for the Slump of Portland Cement Concrete".

3. Compression Tests

- a. A minimum of three specimens, 6 inch (150 mm) in diameter or 4 inch (100 mm), shall be made and tested for every concrete placement. Mold and test one set of test cylinders for every 100 yards (76.5 cubic meters) of concrete or fraction thereof placed each day. On a given project, if the total volume of concrete is such that frequency of testing required above would generate less than 5 strength tests for a given class of concrete, make tests from at least 5 randomly selected batches or from each batch if fewer than 5 batches are used. Cure these cylinders under laboratory conditions except that additional test cylinders cured entirely under field conditions may be required by the Engineer to check the adequacy of curing and protection of the concrete.
- b. Take samples for strength tests in accordance with ASTM C172, Practice for Sampling Freshly Mixed Concrete.
- c. Mold test cylinders and laboratory-cure in accordance with ASTM C31. Test cylinders in accordance with ASTM C39, entitled "Method of Test for Compressive Strength of Cylindrical Concrete Specimens", ASTM C39, using an independent testing laboratory, as approved by the Engineer.
- d. Of each of the 3 cylinders take for a pour, test 1 for information strength at 7 days and test 2 for acceptance strength at 28 days. To meet this specification, average strength of two cylinders from the same sample, tested at 28 days or the specified earlier age, is required for each strength test. Strength level of an individual class of concrete is considered satisfactory if both of the following requirements are met:
 - 1) The average of all sets of 3 consecutive tests equal or exceed the specified strength.
 - 2) No individual strength test (average of two cylinders) falls below specified strength by more than 500 psi (3400 kPa).
- e. Cure field cured cylinders under field conditions meeting Section 7.4 of "Method of Making and Curing Concrete Test Specimens in the Field" (ASTM C31).
- f. Mold field cured test cylinders at the same time and from the same samples as laboratory cured test cylinders. Improve procedures for protecting and curing concrete when strength of field cured cylinders at the test age designated for measuring specified

strength is less than 85 percent of that of companion laboratory cured cylinders. When laboratory cured cylinder strengths are appreciably higher than the specified strength, field cured cylinder strengths need not exceed the specified strength by more than 500 psi (3400 kPa) even though the 85 percent criterion is met.

- g. The strengths of any specimens cured on the job are to indicate the adequacy of protection and curing of the concrete and may be used to determine when the forms may be stripped, shoring removed or the structure placed in service. When the strengths of the job cured specimens are below those specified above, the Contractor must improve the procedures for protecting and curing the concrete.
- h. When concrete fails to meet the requirements above or when tests of field cured cylinders indicate deficiencies in protection and curing, the Owner's representative may order tests on the hardened concrete under Chapter 17.3 of ACI-301-84 or order load tests in Chapter 20 of the ACI Building Code (ACI 318-83) for that portion of the structure where the questionable concrete has been placed. In the event the load or core tests indicate that the structure is unsatisfactory, make all modifications as directed by the Engineer to make the structure sound. If the load or core tests indicate the concrete is satisfactory, all cost of testing shall be paid by Owner.

4. Air Content Tests

- a. The Engineer shall during each strength test, check the air content by either the "Method of Test for Air Content of Freshly Mixed Concrete by the Pressure Method" (ASTM C23 1), "Method of Test for Air Content of Freshly Mixed Concrete by the Volumetric Method" (ASTM C173) or "Method of Test for Unit Weight, Yield and Air Content (Gravimetric) of Concrete" (ASTM C138)

5. Temperature

- a. Test hourly when air temperature is 40°F (4°C) and below, and when 80°F (27°C) and above; and each time a set of compression test specimens is made.

PART 4: MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. The method of measurement and basis of payment is as outlined in the specifications for the various items of concrete work.

4.2 REQUIRED SUBMITTALS

- A. The following are submittals required to become an approved source of supply for Portland Cement concrete placed:

1. Complete concrete mix design meeting all specification requirements. Meet the Mix proportions specified in ACI 301, Chapter 3. Submittals will include the following:

MIX PROPORTIONS

-cement in lbs (kgs)	Type and source of supply
-coarse aggregate	Size and source of supply
-fine aggregate	Source of supply
-water, gallons(liters)	City or well
-admixtures, oz/yd ³ (g/M ³)	Brand and description*

*description as retarder, accelerator, air entraining, etc.

B. MATERIALS INFORMATION

1. Specific gravity (bulk s.s.d. Basis) of coarse and fine aggregate and 1 percent absorption-coarse aggregate unit weight (dry-rodded)-ASTM C33 quality tests including the following:
- a. Fine aggregate
 - 1) gradation AASHTO, T27 and T11 deleterious substances soundness (AASHTO T104) organic impurities (AASHTO T21) mortar-making properties (AASHTO T71)
 - b. Coarse aggregate
 - 1) deleterious substances gradation (AASHTO T27 and T11) soundness (AASHTO T104) percentage of wear (AASHTO T96)
 - c. Current chemical analysis of mixing water (if well)

- d. Current cement mill analysis

2. CONCRETE MIX DATA

- a. slump
- b. % air
- c. unit weight
- d. 7 and 28 day compressive strength

3. VARIATIONS

- a. The following variations will be cause for submittal of a new mix design.
 - 1) Change of aggregate source
 - 2) Change of cement content
 - 3) Addition or exclusion of certain admixtures including, but not limited to, pozzolans, accelerators, retarders and water reducers
 - 4) Change in aggregate size
 - 5) Change in type of cement
 - 6) Failure to attain strength requirements as outlined in ACI 214 or ASTM C94
- b. A variation in any of the following will require Informing the Engineer and possibly data indicating acceptability for use in existing mix designs.
 - 1) Change of cement supplier
 - 2) Change of admixture brands or dosages (not types)
 - 3) Minor adjustments of aggregate proportions accompanying materials changes or to accommodate placement conditions (same w/c ratio)

C. Certification of Ready Mixed Concrete Production Facilities

- 1. Concrete producers are to allow access to their facilities by Engineer or their representatives for inspecting their facilities and/or sampling materials. All facilities should meet the requirements of the "National Ready-Mix Concrete Association" check list for concrete production facilities.

2. Items directly affecting a facility's ability to properly proportion, transport and deliver concrete may be reason for disqualifying that facility as a source of supply until such deficiencies are corrected. Examples would include cement and aggregate scales that will not accurately weight materials or mixer units that will not thoroughly mix concrete materials.

- D. The following chart indicates the submittal frequency for each item required for approval as a source of supply.

TABLE 4.1 SUBMITTAL FREQUENCY

SUBMITTAL	FREQUENCY		
	Monthly	Twice Yearly	Other
1- Complete mix design			(See Item 1, No 4)
2. Aggregate gradations	X		With mix design
3. L.A. Abrasion			With mix design
4. Soundness			With mix design
5. Deleterious substances			With mix design
6. Water quality (if well)		X	
6a. Cube strengths and time of set			With mix design
7. Cement mill certificates	X		
8. Organic Impurities			With mix design
9. Inspection of facilities			As indicated

Note: The above chart applies to the first year of this program. Frequency of submittals may change as dictated by variations of test data.

END OF SECTION

SECTION 03321
CONCRETE WHEEL STOPS

PART 1 GENERAL

1.1 DESCRIPTION

- A. This work consists of furnishing and placement of concrete wheel stops at designated areas on the project drawings or as requested by the Engineer.

PART 2 PRODUCTS

1.1 WHEEL STOPS

- A. Furnish pre-fabricated concrete wheel stops (72" min. length) as designated on the project drawings or as requested by the Engineer.

PART 3 EXECUTION

3.1 GENERAL

- A. Install concrete wheel stops at locations as designated on the project drawings or as requested by the Engineer. Furnish and place No. 5 rebar measuring 18 inches in length to hold stops in place. Drive rebar flush with the top of each concrete wheel stop.

PART 4 MEASUREMENT AND PAYMENT

4.1 PAYMENT

- A. Wheel stops will be measured and paid for by the each (EACH).

END OF SECTION

SECTION 03410
PRE-CAST CONCRETE VAULT LATRINE

PART 1 GENERAL

1.1 DESCRIPTION

- A. This work consists of site preparation (excavation and leveling), backfilling and compaction, and landscaping for one Fishing Access Site (FAS) pre-cast concrete vault latrine at the designated area on the project drawings or as requested by the Engineer. The vault latrine will be provided by others.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Pre-Cast Concrete Vault Latrine.
 - 1. The Owner will supply the latrine through Missoula Concrete Construction, Missoula, MT. The contractor shall coordinate the delivery with Missoula Concrete Construction. The contractor is advised to contact Missoula Concrete Construction **(406) 549-9682**, as soon as possible to insure delivery in a timely manner.
- B. Gravel Bedding for Latrine.
 - 1. See Subsection 02234

PART 3 EXECUTION

3.1 GENERAL

The latrine location shall be staked in the field by the Engineer. Refer to the project drawings for pre-cast concrete vault toilet installation location details, and dimensions.

3.2 EXCAVATION

Excavate for the installation of the toilet vault to a depth that will allow the structure site to be free draining after installation is completed. Salvage conserved topsoil.

3.3 FINISH FLOOR ELEVATION

Finish floor elevation shall be a minimum of 4 to 6 inches above natural grade measured at the front entrance.

3.4 COMPACTION OF EARTH UNDER TOILET VAULTS

Prior to installation of the toilet building, compact the natural ground underlying the vault with a minimum of three passes with a whacker-type mechanical tamper or equivalent method approved by the Engineer.

3.5 INSTALLATION OF GRAVEL BEDDING UNDER TOILET VAULTS

Install two six-inch lifts of compacted 3" minus crushed sub base under the vault footprint. Compact sub base course with one pass with a whacker-type mechanical tamper or equivalent approved by the Engineer. Grade sub base level. Finished sub base shall not vary more than 0.01 foot for the four corners of the vault.

3.6 BACKFILL AND DISPOSAL OF DEBRIS

Backfill around the structure using excavated material for backfill except that rocks larger than six inches in maximum dimension shall not be placed within six inches of exterior of vault walls. Stumps, roots, brush, and other vegetation shall be removed from the site and disposed of in a legal manner by the contractor. Place backfill in lifts not to exceed 18 inches in thickness and compact thoroughly with an excavator bucket or approved equivalent. Compact backfill within 12 inches of the structure wall using a whacker type mechanical compactor.

3.7 COMPACTION UNDER ENTRANCE SLAB

Fill under entrance slab shall have 3" minus crushed sub base course placed in six-inch loose lifts, and compacted with a minimum of two passes with a whacker-type mechanical compactor or equivalent approved by the Engineer.

3.8 FILL AROUND LATRINE AND SLAB

Spread excess excavated material from vault around structure. Final backfill surface shall be flush with the top of the front slab. Allowance shall be made for the depth of the topsoil. Grade backfill away from structure at maximum slope of five percent and a minimum slope of two percent unless otherwise noted in the plans or specs or approved by the Engineer.

3.9 LANDSCAPING

Spread 2" layer of Vegetative Backfill after rough grading is completed. Areas disturbed by excavation, backfilling, and stockpiling of excavated materials shall be hand raked to remove exposed rocks over one-inch in maximum dimension. Oversize rocks removed from the surface shall be disposed of off-site or with the approval of the Engineer used as fill in other items in the contract.

3.10 HIDDEN GROUND CONDITION

If the contractor uncovers bedrock, boulders too big to remove, ground water or other unexpected conditions, he shall immediately contact the Engineer for instructions.

3.11 TEMPORARY FENCING

- A. All excavations left open overnight shall be fenced with polyethylene plastic safety fence, orange color, 48" high, and 4" maximum mesh openings. Fencing shall be secured to steel posts on the side away from the excavation unless otherwise approved in advance by the Engineer.
 - 1. The bottom of the fence shall generally follow the contour of the ground.
 - 2. Maximum spacing of the steel posts shall be ten feet.
- B. No excavations will be left open more than seven days unless otherwise approved by the Engineer.

3.12 PATHWAYS

- A. Construct a pathway between the latrine installation and the adjacent roadway or parking area. Requirements of the pathway is as follows:
 - 1. Utilize compacted crushed 3" minus sub base course for all pathway surfaces, unless otherwise specified on the project drawings. Construct as shown on the Drawings for Gravel Trails throughout the project.
 - 2. Construct pathways that follow existing ground contours as much as possible. Limit excessive excavation and embankment.
 - 3. Cross slopes on the pathway shall be 1%.
 - 4. The running slope of the pathway shall not exceed 5%
 - 5. Slopes will be checked using a 3' level.
 - 6. Ridges or other sudden changes in slope shall not exceed of 1/2". The top surface of the path shall match the top surface of the Vault Latrine Slab within 1/2".

PART 4 MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. Latrine Installation (Owner Furnished) will be measured and paid for by the Lump Sum (LS) including all labor, equipment, materials, and incidentals required for the completion of the work.
- B. Measurement and Payment for the path to the Latrine will be paid separately under the bid item for Construct Gravel Trail.

END OF SECTION

SECTION 99995
ADA PLATFORM FOUNDATION

PART 1 GENERAL

1.1 DESCRIPTION

This work consists of constructing the foundation units for the fishing access platform. The foundation units consist of cast in place footings.

PART 2 PRODUCTS

2.1 CONCRETE

Use M-4000 concrete conforming to Section 03310.

2.2 REINFORCING STEEL

Use plain, deformed reinforcing steel conforming to Section 03210.

2.3 PIER CASING

Use 18 gauge, galvanized, corrugated metal pipe conforming to Section 02725 or Sonna tubes of the appropriate diameter.

2.4 BACKFILL

Following placement and curing of the concrete, backfill around the foundation units with spoils saved from the excavation. Place material in lifts not to exceed 6 inches in thickness and compact thoroughly with vibratory equipment. Remove all stones larger than 6 inches from the backfill before placement.

2.6 SUBMITTALS

- A. A minimum of 14 days prior to placing concrete, submit for review and approval the proposed concrete mix design, including concrete cylinder compressive strength test laboratory report performed within the previous twelve months for the proposed mix design.
- B. A minimum of 14 days prior to fabricating reinforcing steel, submit for review and approval fabrication shop drawings for the reinforcing steel, and steel mill certification for each bar size.

PART 3 EXECUTION

3.1 GENERAL

Construct foundation units in conformance with the requirements of the project drawings and Section 03310.

3.2 EXCAVATION

- A. Excavate materials of whatever type encountered as required for construction of the foundation units. When personnel will enter excavations, make excavations safe for entry in accordance with OSHA requirements.
- B. Provide dewatering means (pumps, etc.) to dewater excavations as necessary to complete construction of foundation units.
- C. Dispose of excavation spoils remaining after backfill offsite or, if permitted by Engineer, at onsite location designated by Engineer or incorporate into the surrounding pond grading.

3.3 FORMWORK

- A. Utilize the specified corrugated pipe casing or Sonna Tube as permanent, stay-in-place forms for the pier footings. Firmly seat entire perimeter of casing/tube into bottom of excavation sufficiently to prevent plastic concrete from escaping from casing during placement.
- B. Cut casing to length. Ensure that the top of concrete is slightly higher than the casing. Backfill any voids between outside of pier casings and excavation sidewalls with native material excavated. Ensure that casings remain plumb during backfilling.

3.4 CONCRETE PLACEMENT

- A. Arrange for materials testing laboratory to perform field sampling and testing, and laboratory testing of concrete. Make one set of 6 compressive strength test cylinders each day of concrete placement. Have testing lab test one cylinder each at 7, 14, and 21 days, two cylinders at 28 days, and hold one if needed for a 56-day break in the event of low strength result.

Place concrete in accordance with Section 03310.

3.5 APPLYING LOADS

- A. Following placement of concrete, wait a minimum of 14 days or until concrete attains the required minimum 28-day compressive strength, whichever occurs first, before setting platform on foundation units.

PART 4 MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. Provide and Install ADA Platform Foundation Units will be measured and paid for by the Lump Sum (LS), including all labor, equipment, materials, and incidentals required for the completion of the work.

END OF SECTION

SECTION 99996
ADA PLATFORM DECK

PART 1 GENERAL

1.1 DESCRIPTION

This work consists of furnishing and delivering the fishing access platform and installing at the project site in accordance with the project drawings and these specifications.

PART 2 PRODUCTS

2.1 STEEL

- A. Use the following steel grades: ASTM A992 for wide flange beams, ASTM A36 for plates, channels and angles, and ASTM A53 Grade B for pipe.
- B. Assemble and weld steel support structure in a shop. Assemble two separate units to be joined on site.
- C. Hot-dip galvanize the steel beams and columns and handrail after shop assembly.

2.2 SUB DECKING AND DECKING

Use pressure-treated wood cross supports consisting of structural grade Douglas Fir lumber. Use composite decking with a nominal thickness of 1" or more and that is capable of supporting a uniform load of 100 pounds per square foot with a deflection of less than 1/8 inch on the supports shown on the drawings as determined by ASTM D-7032. Composite decking shall be color 'Woodland Brown' or equivalent.

2.3 CONNECTORS

- A. Use standard hex bolts of size(s) indicated on the project drawings and conforming with ASTM A325 for bolted steel connections.
- B. Use E70XX weld electrode complying with AWS D1.1.

2.4 SUBMITTALS

A minimum of 14 days prior to fabricating the platform units, submit to Engineer for review and approval fabrication shop drawings showing all materials to be used in construction of the platform units.

Submit warranty and performance data for composite decking. Warranty must include provisions against rot, decay, splitting, checking, splintering, fungal damage, and termite damage for a period of 10 or more years. Warranty must also include provisions for staining and fading for a period of 10 or more years.

PART 3 EXECUTION

3.1 GENERAL

Construct and install the prefabricated steel structures in conformance with the requirements of the project drawings, specifications, and the American Institute for Steel Construction “Code of Standard Practice for Steel Buildings and Bridge” and “Specifications for Structural Steel Buildings,” and the American Welding Society “D1.1 Structural Welding Code-Steel.”

3.2 FABRICATION AND INSTALLATION

- A. Shop fabricate the platform in two units as shown on the project drawings.
- B. Remove slag from all welds, clean all steel as necessary, then hot-dip galvanize the platform units.
- C. At welds made after hot-dip galvanizing, remove galvanizing coating as necessary prior to making welds; clean subsequent welds and paint with zinc-rich paint.
- D. Deliver platform sections, with handrail attached, and associated materials to project site.
- E. Wait a minimum of 14 days following placement of concrete for foundation units or until concrete attains the required minimum 28-day compressive strength, whichever occurs first, before setting platform on foundation.
- F. Attach rigging and lift and set units on columns in manner so as to not damage platform or foundation units.
- G. Bolt the platform -units together.
- H. Anchor platform to support columns as shown on project drawings.
- I. Install sub decking and decking as shown on the drawings. Use structural screws either galvanized or stainless steel and with a length of at least 1.5 inches longer than the thickness of the decking to attach decking to sub decking. Screws shall have a

countersunk head with an internal torx tamper proof fitting. Use two screws on each decking piece at each subdecking piece. Screws shall be located at least one inch from the edge of each decking piece. Screw heads shall be flush to the decking.

PART 4 MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. Provide and Construct ADA Platform Deck will be measured and paid for by the Lump Sum (LS) including all labor, equipment, materials, and incidentals required for the completion of the work.

END OF SECTION

Appendix A
Construction Drawings
Provided Under Separate Cover

Appendix B

Permits



Montana Fish, Wildlife & Parks

3201 Spurgin Road
Missoula, MT 59804
September 27, 2017

Montana NRDP
Attn: Tom Mostad
1720 9th Ave
PO Box 201425
Helena, MT

RECEIVED

SEP 29 2017

NATURAL RESOURCE
DAMAGE PROGRAM

SUBJECT: Permit No. SPA - 32-17 R-2
Waterbody: Racetrack Pond
Project Name: Pond improvements
Water Code: 06-drainage

Dear Montana NRDP:

Montana Fish, Wildlife & Parks has reviewed the proposed project in Racetrack Pond. The project is approved provided it is carried out in accordance with the information in the application and all general and any special listed below.

GENERAL CONDITIONS

1. Complete work affecting a streambed or stream bank in an expeditious manner to avoid unnecessary impacts to the stream.
2. Limit the clearing of vegetation to that which is absolutely necessary for construction of the project. Take precautions to preserve existing riparian vegetation. Salvage and reuse native vegetation where possible.
3. Install and maintain erosion control measures where appropriate to protect aquatic resources. Do not clear and grub land adjacent to streams prior to installing proper erosion and sedimentation controls. Conduct all work in a manner that minimizes turbidity and other disturbances to aquatic resources.
4. Plan temporary construction facilities to:
 - a. Minimize disturbance to stream banks, stream bank vegetation, and the streambed by locating staging or storage facilities at least 50' horizontally from the highest anticipated water level during construction;
 - b. not restrict or impede fish passage in streams; and
 - c. not restrict any flow anticipated during use.
5. Provide sediment controls for drainage from topsoil stockpiles, staging areas, access roads, channel changes, and instream excavations.
6. Isolate work zones from flowing and standing waters to prevent turbid water and sediments from being discharged into streams or other drainages that flow directly into the stream. Divert flowing waters around the work zone.
7. Do not spill or dump material into streams. Store and handle petroleum products, chemicals, cement and other deleterious materials in a manner that will prevent their entering streams.
8. Do not allow wash water from cleaning concrete-related equipment or wet concrete to enter streams.

9. Do not operate mechanized equipment in any stream or flowing water unless special authorization is obtained. If special authorization is granted, the following conditions apply:
 - a. Powerwash all equipment allowed in a stream prior to entering the stream channel.
 - b. Clean and maintain all equipment so that petroleum-based products and hydraulic fluids do not leak or spill into the waterway.
10. Reclaim streambeds and stream banks as closely as possible to their pre-disturbed condition.
11. Restore disturbed stream banks to their natural or pre-disturbed configuration to match adjacent ground contours or as specified in the project plans. Stabilize, reseed, and re-vegetate disturbed areas. Install and maintain long-term biodegradable erosion-control measures to protect these areas until adequate vegetation has been established.
12. Restore temporary access routes and any temporarily disturbed areas to original conditions, including original contours and vegetation.
13. Dispose of any excess material generated from the project above the ordinary high water mark and in an area not classified as a wetland.

SPECIAL CONDITIONS

1. This permit is not valid until the attached 318 authorization is signed and returned to Pat Saffel at the above address or faxed to 406-542-5529.

Note: This permit is valid for **one year** from the date of receipt.

318 AUTHORIZATION REVIEW

I have reviewed the above project on behalf of the Montana Department of Environmental Quality (DEQ) pursuant to the Montana Water Quality Act Short-term Water Quality Standards for Turbidity 75-5-318 MCA:

☐ This project **will not** increase turbidity if completed according to the conditions listed in the 310 or 124 permit. Therefore, application to DEQ for a 318 authorization **is not** required.

☐ Impacts to the physical and biological environment from turbidity generated as a result of this project are uncertain. Therefore, the applicant must contact the Montana Department of Environmental Quality, 1520 East Sixth Avenue, Box 200901, Helena, MT 59620-0901, (406 444-3080) to determine project specific narrative conditions required to meet short-term water quality standards and protect aquatic biota.

☒ Turbidity generated from this project is expected to be short-term and have only temporary and minor impacts on the physical and biological environment. Therefore, compliance with the conditions stated in ***DEQ's Short Term Water Quality Standard for Turbidity Related to Construction Activity***, as well as other conditions listed in the 310 or 124 permit, are appropriate for this project.

Sincerely,



Patrick Saffel
Fisheries Manager

Cc: Deer Lodge Valley CD



**SHORT-TERM WATER QUALITY STANDARD
FOR TURBIDITY RELATED TO
CONSTRUCTION ACTIVITY
(318 Authorization)**

Dear Applicant:

This 318 authorization is the result of your recent application for a 310 permit from your local Conservation District or a 124 permit from Montana Fish, Wildlife and Parks. This authorization is valid for the time frame noted on your permit.

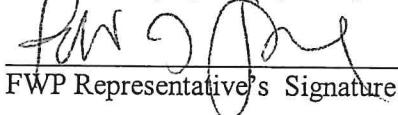
This is not your 310 or 124 permit and no construction activity should occur until you have received a valid 310 or 124 permit as well as any other permits that apply to this proposed construction activity.

This authorization is the result of an Operating Agreement between the Montana Department of Environmental Quality (DEQ), and Montana Fish, Wildlife and Parks (FWP).

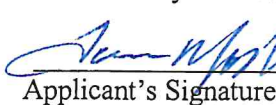
The applicant agrees to comply with the conditions stated below, as well as other conditions listed in the 310 or 124 permit issued for this project. Signatures of the applicant and FWP are required to validate this authorization.

1. Construction activity in or near the watercourse are to be limited to the minimum area necessary, and conducted so as to minimize increases in suspended solids and turbidity that could degrade water quality and adversely affect aquatic life outside the immediate area of operation.
2. The use of machinery in the watercourse shall be avoided unless absolutely necessary.
3. All disturbed stream banks and adjacent areas created by the construction activity shall be protected with erosion control measures during construction. These areas shall be reclaimed with appropriate erosion control measures and revegetated to provide long-term erosion control.
4. Any excess material generated from this project must be disposed of above the ordinary high water mark, in an area not classified as a wetland, and in a position not to cause pollution of State waters.
5. Clearing of vegetation will be limited to that which is absolutely necessary for construction of the project.
6. This authorization does not authorize a point source surface water discharge. MPDES permit is required for said discharge.
7. Open cut creek crossings will not be allowed in flowing water. Stream water must be diverted around the open cut area (pump, flume etc.)
8. The applicant must conduct all activities in full and complete compliance with all terms and conditions of all permits required for this activity issued pursuant to the Montana Natural Streambed and Land Preservation Act (310 permit), the Stream Protection Act (124 permit) the Federal Clean Water Act (404 Permit), any MPDES permits for dewatering or storm water control in the construction area and any valid Memorandum of Agreement and Authorization (MAA) negotiated for this activity.

The FWP representative has determined that this project is within the scope of the programmatic Environmental Assessment prepared by DEQ and FWP for the issuance of narrative turbidity standards.


FWP Representative's Signature

Date: 9/27/17


Applicant's Signature

Date: 10-4-17

Name and location of project: Raccoon Pond & Clark Fork River

